

Venture, Thebaud and North Triumph

Offshore

Environmental Effects Monitoring Program 2002 Annual Report

ExxonMobil
CANADA PROPERTIES LTD.

Project
NSD16737



**Jacques
Whitford**

Consulting Engineers
Environmental Scientists
Risk Consultants

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**SABLE OFFSHORE ENERGY PROJECT
2002 ANNUAL REPORT
OFFSHORE ENVIRONMENTAL EFFECTS
MONITORING PROGRAM**

PROJECT NO. NSD16737

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PROJECT NO. NSD16737

REPORT TO

EXXONMOBIL CANADA LIMITED

ON

SABLE OFFSHORE ENERGY PROJECT

**2002 ANNUAL REPORT
OFFSHORE ENVIRONMENTAL EFFECTS MONITORING PROGRAM**

**Jacques Whitford Environment Limited
3 Spectacle Lake Drive
Dartmouth, NS B3B 1W8
Tel: 902-468-7777
Fax: 902-468-9009**

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EXECUTIVE SUMMARY

This document presents the results of Exxon Mobil's Sable Offshore Energy Project (SOEP) Tier I EEM Program which focuses on the activities at the Venture, Thebaud and North Triumph Gas Fields between June 1998 to July 2002. The discharge of drilling cuttings, containing the synthetic-base mud NovaPlus, to the sea ceased as of December 31, 1999. Water-based mud is discharged overboard during periodic drilling of new wells. The EEM survey undertaken in 2002 continued to evaluate recovery and periodic exposure of the benthos to the discharge of drill waste into the marine environment.

The environmental attributes chosen for the Offshore EEM Program were based on valued ecosystem components (VECs) identified during the EIS process and attributes identified by Sable Offshore Environmental Effects Monitoring Advisory Group (SEEMAG) and the EEM study team. The study attributes include sediment chemistry, sediment toxicity, benthic habitat and communities, taint in shellfish, marine mammal behaviour, and seabird distribution.

The extent of contamination by drill cuttings decreased to background concentrations at 250 m and beyond at the Venture field. Elevated petroleum hydrocarbons and barium were still present in sediments at distances of 250 m and 500 m in the direction of prevailing currents from the North Triumph and Thebaud platforms, but at concentrations significantly lower than immediately following drilling. Sediment toxicity on amphipods correlated with these findings.

No significant effect on epifaunal communities was observed at any of the survey stations within the Venture, Thebaud or North Triumph fields. Statistically significant effects on abundance of a polychaete, ophurioid and amphipod species were found from post-drilling surveys. Only the amphipod species showed a directional effect along one axis. As there were no effects related to distance from the platform, the effects are likely the result of variability. No drill cutting pile was apparent at North Triumph from drilling of the single well. Video surveys around the platforms show an abundance of mussels, sea stars, sea cucumbers and crabs.

Mussels collected from the Venture jacket leg contained a high level of interfering material resembling hydrocarbon distillation cut. No sensory evaluation was conducted on these mussels due to proximity to the platform. Jonah crab tissues in the legs and hepatopancreas collected adjacent to Thebaud and Venture contained hydrocarbon profile similar to NovaPlus drilling mud. Further testing with more samples will be conducted in 2003.

The whales, dolphins and seal species observed from the platforms are those species which typically frequent the area. It is reasonable to assume that the marine mammals observed from Thebaud are within the acoustic range of the sound spectra radiating from the drilling and production activities.

Low incidence of dead birds and the high frequency of the surveys indicate that there are no large scale bird fatalities in the vicinity of the platforms. None of the oiled seabird carcasses found on Sable Island contained hydrocarbons traceable to the SOEP Tier 1 operations.

1.0 INTRODUCTION

This document presents the results of ExxonMobil Canada Properties Limited (ExxonMobil) Sable Offshore Energy Project (SOEP) EEM work to date as of July 2002 and includes baseline and multiple EEM sampling events during and post-drilling. At the Venture field, one baseline, three drilling and four post-drilling surveys were conducted. At Thebaud, one baseline, two drilling and four post-drilling surveys were conducted. At North Triumph two baseline, one drilling and four post-drilling surveys were conducted.

As of December 31, 1999, ExxonMobil transported all synthetic-based cuttings to shore for treatment. Since then, drilling at Venture occurred between February 7 and May 11, 2001 and from May 12 to October 22, 2002. Water-based mud was used for the drilling and discharged overboard. Synthetic-based mud was used below the top hole sections but the waste mud was skipped and shipped to shore. A well at South Venture was drilled from October 22, 2002 to January 22, 2003. Workover drilling was undertaken at a Thebaud well from September to November 2001. No discharges occurred as a result of that work.

The EEM surveys for this year's studies examined the continued recovery phase of the marine benthos. Each field is fully under production; Venture and Thebaud platforms released produced water. Produced water from North Triumph is transported to the Thebaud production platform via the 18 inch interfield pipeline.

1.1 EEM Design

The objective of the EEM program is to test whether the effects of discharging drill wastes into the marine environment occur within the zones of influence predicted by the EIS. The goal of the EEM program is to assist decision-making by providing feedback to ExxonMobil, Canada - Nova Scotia Offshore Petroleum Board (CNSOPB), stakeholders, and the public.

Environmental measurements are concentrated within the area of the platforms where meaningful changes are expected to occur and where the point source discharge is located. Selected attributes evaluated in the 2002 EEM program included sediment quality, benthic habitat and biota, shellfish taint and body burden, marine mammals, and seabirds. The assessment of produced water is on hold pending the production of sufficient quantity to study. At present, there are insufficient volumes of produced water generated to capture for evaluation of impacts. It is likely that no significant effects are attributable to produced water due to low volume and intermittent discharges.

The basic strategy of this monitoring design is to take environmental measurements at sufficient spatial coverage over the course of the drilling and production phases to determine drilling material deposition, movement, and fate/impact of discharged waste. The sampling program is based on a gradient to background grid design commonly used to monitor effects from offshore oil and gas developments. This sampling grid consists of major and minor axes with sampling conducted at specific points on these axes. The major axes align with the mean current and most probable storm path directions of drilling and production waste discharges, as predicted by modelling (MacLaren Plansearch Limited 1997 a,b). The monitoring program for the drilling areas was based on a radial design (Figure 1.1), with samples located at regular distances along axes extending away from the drill site, like spokes of a wheel. Major Axes 3 and 7 were aligned with the expected prevailing current direction. Major Axes 1 and 5 were placed at right angles to that direction. Minor Axes 2, 4, 6, 8 are oriented equidistant to the major axes.

1.2 Objectives

This EEM program involves the collection of repeated measurements of environmental variables to detect changes that are directly or indirectly attributable to drill and production waste discharges. The EEM program is undertaken with the following primary objectives:

- to verify whether the effects of discharging drill and production wastes into the marine environment occur within the zones of influence predicted by the EIS;
- to evaluate the effectiveness of mitigation and identify the need for improved or altered mitigation;
- to provide an early warning of undesirable change in the environment; and
- to provide results to the CNSOPB, other regulatory authorities, stakeholders and public so that there can be informed decision making.

1.3 Scope

This report focuses on the EEM program of the Tier I development and includes the natural gas well fields at Venture, Thebaud and North Triumph. Drilling at Venture commenced on June 20, 1998, followed by development drilling at Thebaud on November 22, 1998. Drilling at the North Triumph gas field started in November 1999. The surveys undertaken in 2002 continued to investigate two main effects of the Tier I development:

- 1) the recovery of the marine benthos from the discharge of drilling wastes, and
- 2) effects from the periodic discharge of water-based mud from well development.

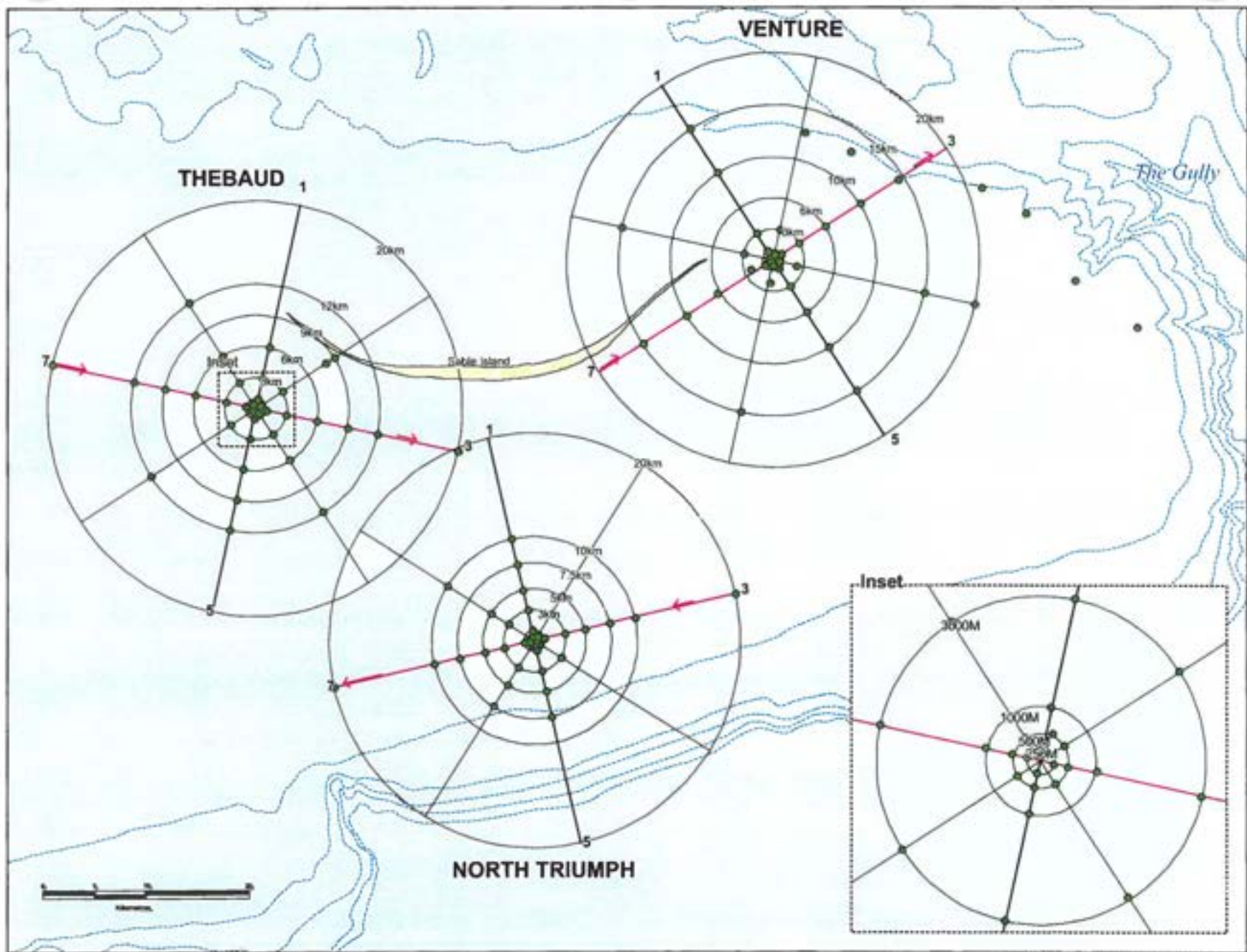


Figure 1.1
Environmental Effects Monitoring Sample Locations

- EEM Sample Site
- ➔ Direction of Prevailing Current

2.0 METHODOLOGIES

The majority of the EEM sampling design focuses upon the seabed because sediments are the ultimate destination or sink for persistent chemicals in the marine environment from the release of drill fluids and cuttings. Particulates from drill wastes and produced water in the benthic boundary layer are also considered in the program.

2.1 Sampling Design

The sampling design and methodologies for the JWEL sampling program are described in detail in the baseline and drilling design report (JWEL 1998).

Sediment Quality

Sediment was collected using a Smith-McIntyre grab sampler and analysed for barium, hydrocarbons and toxicity. Sediment samples were collected annually at all stations for each platform.

Benthic Habitat

Benthic habitat and epifaunal species were recorded at each sampling site using an underwater still camera and an underwater video camera to provide qualitative and quantitative assessments of changes to this environmental component.

Taint and Body Burden of Fish and Shellfish

Taint and hydrocarbon shellfish analyses were assessed from mussels attached to the platform legs at Thebaud and Venture. The low volume, intermittent discharge and high dilution of the produced water in the receiving environment necessitated focusing tainting effort to the platforms.

Jonah crabs were collected at the Thebaud and Venture platforms for preliminary screening of drill waste contamination. Hepatopancreas and leg tissues were submitted for hydrocarbon analysis.

Marine Mammals and Seabirds

Offshore observers provided by the Oil and Gas Observer Program (OGOP) and organized through the Seafood Producers Association of Nova Scotia (SPANS) are contracted by ExxonMobil to conduct platform-based daily monitoring of marine mammals and seabirds that are within visual range. Dead and exhausted seabird surveys are also conducted around the platform structure.

An independent oiled bird survey is conducted on Sable Island beaches on a monthly basis. Collected specimens are sampled for oil identification. These data are provided for inclusion into the annual report.

2.2 Data Analysis

Details on the statistical approach and analysis for the various EEM components are provided in Appendix A.

3.0 SEDIMENT CHEMISTRY

This section presents the results of the sediment chemistry component of the EEM surveys undertaken from November 1998 through to July 2002 and compares the findings with the baseline surveys.

Appendix B provides the sediment chemistry data from 1998 to 2002. Overall, the analysis of sediments collected between 1998 and 2000 had shown non-detectable results for virtually all samples submitted for the PAH (polycyclic aromatic hydrocarbon) and BTEX (benzene, toluene, ethyl benzene and xylenes) compounds. Likewise, concentrations of the low molecular weight (C_6 - C_{11}) in the total petroleum hydrocarbon (TPH) compounds also have been uniformly non-detectable. Therefore, a limited analytical suite was employed during 2001 to focus on the sediment chemistry parameters of concern. Organic analyses included benzene, toluene, ethylbenzene, xylenes, as well as the fractionated TPH compounds (Appendix B). Of these, only the heavier (C_{11} - C_{20} and C_{21} - C_{32}) hydrocarbons were detected. For statistical purposes, hydrocarbons were expressed as TPH (the sum of C_6 to C_{32} hydrocarbons).

Among the inorganic analytes, concentrations of antimony, arsenic, beryllium, boron, cadmium, cobalt, copper, lithium, molybdenum, mercury, nickel, selenium and tin were typically less than or at the analytical detection limits in virtually all samples submitted between 1988 and 2000. Of the remaining analytes (total inorganic carbon (TIC), total organic carbon (TOC), aluminum, barium, chromium, iron, lead, manganese, strontium, thallium, uranium, vanadium and zinc) barium was considered to be a key element for monitoring purposes because it is a constituent of barite, a clay-like mineral used in drilling muds and has shown change in concentration relative to drilling activities.

As part of the overall quality assurance and quality control plan for the monitoring program, field duplicate samples were collected at selected sampling stations. In addition, laboratory duplicate samples were also processed. The field duplicate samples incorporate at least three sources of variation (field variation between samples, sub-sampling variation in the laboratory, and analytical uncertainty), whereas the laboratory duplicate samples incorporate sub-sampling variation and analytical uncertainty. Inspection of the quality assurance results indicated that there was little variation attributable to laboratory analysis. Variability in field duplicates was somewhat higher, indicating that there is local scale patchiness in TPH, and to a lesser extent barium concentrations. Overall, however, the laboratory and field duplicates indicated that the data were of high quality and reliable (Appendix A).

3.1 Sediment Chemistry at the Gully

The data set for the Gully consists of five sampling stations that have been sampled on each of the seven consecutive surveys (Appendix B). As a result, it is possible to test for differences over Survey time (with the five sampling stations as replicates). It would also be possible to test for differences between stations at the Gully. However, as there were no drilling activities at the Gully, and these samples were

collected to provide assurance that activities near Sable Island were not affecting this area, detecting differences between stations at the Gully is of considerably less interest than detecting differences over Time. Appendix A provides the results of the statistical analyses.

An analysis of variance (ANOVA) was conducted only for sediment barium and TPH concentrations. For barium, no significant differences were detected at Gully stations.

For TPH, there was a significant difference at Gully stations over Survey times. Higher levels of TPH were detected at Gully stations in June 1998, November 1998 and June 1999 than at any other time. TPH concentrations were between 7.5 mg/kg in June 1998 after which time lower detection limits were available. TPH concentrations were between 7.5 and 0.25 mg/kg in November 1998. TPH concentrations were between 2.65 and 5.45 mg/kg sediment in June 1999. In 2000, levels were less than detectable (0.5 mg/kg). In June 2001, TPH ranged from 0.47 to 0.57 mg/kg in sediments from the Gully sites. In July 2002, TPH levels were less than detectable (0.5 mg/kg).

Overall, the TPH concentrations at the Gully stations are low. The higher TPH concentrations are consistent with background TPH concentrations measured at far-field stations around the drilling platforms in 1998 and 1999.

3.2 Sediment Chemistry at Venture

3.2.1 Near-Field vs. Far-Field

Differences between barium and TPH concentrations at the near-field and the far-field areas were evaluated for the eight Survey dates, using ANOVA (testing for effects due to Field, Survey, and Field×Survey). Data were log-transformed, as appropriate, to improve the homogeneity of the variance (Appendix A).

For barium, there was no statistically significant evidence of differences between near-field and far-field ($p=0.307$) and between surveys ($p=0.219$). For TPH, there were significant differences between near-field and far-field ($p=0.001$) with TPH being higher in the near field. There was a significant difference between surveys ($p=0.002$). TPH was higher overall during the November 1998 (75.2 mg/kg) survey than at other times. During June 2001, TPH were detected at 250 m (Axis 7) from the platform at 16 mg/kg. In 2002, TPH were detected at 13.3 mg/kg at Station 250-3 and 10.4 mg/kg at Station 250-5. All remaining concentrations were <10 mg/kg at all sampling stations over all Surveys.

As there were no large-scale differences between the near-field and far-field that were indicative of an effect of drilling that affected the entire near-field area, it was considered appropriate to examine possible effects within the near-field area (250 to 3,000 m).

3.2.2 Near-Field Area

Concentrations of TPH in sediment were higher overall at the 250 m distance than at 500 m, 1,000 m or 3,000 m distances which was interpreted as an effect due to drilling ($p < 0.001$). Taken over all Surveys, TPH concentrations in sediments at a distance of 250 m from the Venture platform ranged from <0.5 mg/kg to 75.2 mg/kg (in November 1998) with a median value of 1.45 mg/kg. The highest recorded value at a distance of 500 m from the platform was only 6.7 mg/kg (median value <1 mg/kg). Overall, however, TPH appears to have peaked at a distance of 250 m from the drilling platform at Survey 2 (November 1998), and lower values have been recorded since that time.

In 2002, total petroleum hydrocarbon concentrations in near-field stations appear to be relatively stable and are within measured background (1998) concentrations (<0.25 to 10 mg/kg). The highest concentration of 13.3 and 10.4 mg/kg were found at Stations 250-3 and 250-5, respectively. Higher concentrations were found in previous surveys in the southwestern direction (Axis 7), therefore, there appears to be no definite uniform directionality of cuttings distribution at Venture. This finding is not unexpected due to the shallow and dynamic water depths. Historical ranges in TPH concentrations at the 250 m and 500 m distances at Venture are shown below in Table 3.1.

Table 3.1 Ranges in Total Petroleum Hydrocarbons Concentrations at Venture Near-Field Stations

Survey	Survey Period	250 m Radius	500 m Radius
1	June 1998	<15 mg/kg*	<15 mg/kg
2	November 1998	75.2– <15 mg/kg	<15 mg/kg
3	June 1999	37.4–2.6 mg/kg	5.8–2.7 mg/kg
4	November 1999	15.2–3.3 mg/kg	<0.5 mg/kg
5	June 2000	1.7– <0.5 mg/kg	1.4– <0.5 mg/kg
6	November 2000	2.8– <0.5 mg/kg	1.3– <0.5 mg/kg
7	June 2001	16.9–1.97 mg/kg	3.61–0.93 mg/kg
8	July 2002	13.3– <0.5 mg/kg	<0.5 mg/kg

* limit of detection at that time

For barium, there were significant differences due to Distance ($p=0.004$). A slightly elevated barium concentration of 350 mg/kg on Axis 5 at 250 m in November 1999 is evident. Barium concentrations were higher overall in June 2001 (Survey 7) than at Surveys 1, 2, 6 or 8. During that survey, barium concentration at 250-7 (i.e. 250 m on Axis 7) was 330 mg/kg. In addition, barium concentrations were lower overall at the 3,000 m distance from the platform, than at the 250 and 1,000 m distances. Barium concentrations in sediment were within background levels through all survey periods. Ranges in barium concentrations on the 250 m and 500 m radii are shown below in Table 3.2.

Table 3.2 Ranges in Barium Concentrations at Venture Near-Field Stations

Survey	Survey Period	250 m Radius	500 m Radius
1	June 1998	170–140 mg/kg	210–180 mg/kg
2	November 1998	280–190 mg/kg	220–140 mg/kg
3	June 1999	240–170 mg/kg	240–170 mg/kg
4	November 1999	350–160 mg/kg	220–190 mg/kg
5	June 2000	240–160 mg/kg	240–170 mg/kg
6	November 2000	240–150 mg/kg	180–120 mg/kg
7	June 2001	330–230 mg/kg	260–140 mg/kg
8	July 2002	260–200 mg/kg	250–140 mg/kg

3.2.3 Summary of Observed Effects at Venture

There were no large-scale sediment chemistry differences between the near-field and far-field that would indicate widespread effects attributable to drilling activities at the Venture platform. Within the near-field, TPH concentrations at some stations 250 m from the platform increased over baseline (1998) concentrations after drilling began as shown by the Distance×Time interaction which provided definitive statistical evidence. In this regard, a peak TPH concentration of 75.2 mg/kg was detected at the 250 m distance on Axis 7 during the November 1998 survey, and concentrations of 37.4 and 29.3 mg/kg were detected at the same distance on Axes 3 and 7 during the June 1999 survey. By November 1999, the highest concentration was 15.2 mg/kg, recorded at the 250 m distance on Axis 5. A TPH concentration of 16.9 mg/kg was observed at 250 m distance on Axis 7 during June 2001. In 2002, the highest concentrations found were 13.1 and 10.4 mg/kg at 250 m distance on Axis 3 and 5, all other stations were non-detectable at the 0.25 mg/kg limit.

3.3 Sediment Chemistry at Thebaud

3.3.1 Near-Field vs. Far-Field

The results of the statistical testing are summarized in Appendix A and chemistry data are provided in Appendix B. The barium and TPH concentrations were higher overall in the near-field than in the far-field (Ba $p=0.002$, TPH $p<0.001$). The TPH concentration was also higher in June 1999 than at other times.

For barium, there was statistically significant evidence of differences between near-field and far-field but not between surveys ($p=0.849$). For TPH, there were significant differences between near-field and far-field with TPH being higher in the near field, and significant differences between surveys ($p<0.001$). Overall, the differences associated with barium and TPH appear may be indicative of effects attributable

to drilling. These effects are explored in more detail below, by examining the significance of variation within the near-field zone. The differences observed for other variables appear to reflect large-scale environmental or temporal variability.

3.3.2 Near-Field Area

For TPH, significant differences were identified due to Distance ($p < 0.001$) and Survey ($p < 0.001$). The Distance effect was attributable to the fact that overall TPH concentrations decreased with distance from the Thebaud platform. The Survey effect was due to higher overall TPH concentrations in June 1999 than at other times. Although there was no significant Distance $\times$ Survey interaction term ($p = 0.867$), these changes were considered to be attributable to drilling activities.

Over all surveys and axes, the observed TPH concentrations ranged from 0 to 1,550 mg/kg at a distance of 250 m from the drilling platform, but concentrations dropped rapidly with increasing distance. The observed concentrations at the 500 m distance ranged from <0.5 to 564 mg/kg, and at 1,000 m distance, the range of values was <0.5 to 35.5 mg/kg.

In July 2002, TPH concentrations of 468 mg/kg and 146 mg/kg were detected at distances of 250 m and 500 m, respectively, on Axis 3. The TPH concentration at within 500 m along Axis 3 shows no apparent decrease/recovery of sediment contamination since production drilling ceased, as observed at Venture. All other TPH results for the area around the Thebaud platform were <3 mg/kg.

The highest TPH concentrations were found along the 250 m radius on Axis 3 and 7, the predicted prevailing easterly and westerly current directions. TPH levels decrease substantially along Axis 7 with Survey, but is persistent along Axis 3 which indicates the residual current and transport direction of drill cuttings. Ranges in TPH concentrations over six survey periods are shown below in Table 3.3.

Table 3.3 Ranges in Total Petroleum Hydrocarbons Concentrations at Thebaud Near-Field Stations				
Survey	Survey Period	250 m Radius	500 m Radius	1000 m Radius
1	June 1998	<15 mg/kg	<15 mg/kg	<15 mg/kg
3	June 1999	1550–24.7 mg/kg	324–5.3 mg/kg	35.5–3.3 mg/kg
4	November 1999	23.4–4.5 mg/kg	23.4– <0.5 mg/kg	<0.5 mg/kg
5	June 2000	486.8–4.2 mg/kg	283–1.4 mg/kg	2.7– <0.5 mg/kg
6	November 2000	449.3– <0.5 mg/kg	36.8– <0.5 mg/kg	0.4– <0.5 mg/kg
7	June 2001	360–0.8 mg/kg	564–0.5 mg/kg	0.5–0.4 mg/kg
8	July 2002	468–0.9 mg/kg	146– <3.0 mg/kg	<3.0 mg/kg

For barium, there were no Survey effects ($p=0.198$) indicating that barium concentration overall have not changed over the period of monitoring. There were, however, significant Distance effects ($p<0.001$), indicating that barium concentrations 250 m distant from the platform are higher than concentrations at 500 m, 1,000 m and 3,000 m; and that concentrations at 500 m are greater than at 1,000 m. The trend in barium concentrations follows that of TPH. In June 2000, barium levels were highest at 250 m radius on Axes 3 and 7. Barium decreased to background levels during the November periods and was elevated in the June periods, except on Axis 3 which remained elevated in 2000. The 2002 results show that the concentration of barium did not decrease within 250 and 500 m along Axis 3. Barium was not elevated at the 1000 m radius at anytime. Ranges in barium concentration are shown below in Table 3.4.

Survey	Survey Period	250 m Radius	500 m Radius	1000 m Radius
1	June 1998	270–200 mg/kg	230–89 mg/kg	200–95 mg/kg
3	June 1999	760–300 mg/kg	650–120 mg/kg	180–80 mg/kg
4	November 1999	280–170 mg/kg	230–120 mg/kg	150–120 mg/kg
5	June 2000	1200–230 mg/kg	900–150 mg/kg	210–110 mg/kg
6	November 2000	890–190 mg/kg	670–120 mg/kg	210–130 mg/kg
7	June 2001	790–210 mg/kg	1200–150 mg/kg	200–120 mg/kg
8	July 2002	1200–230 mg/kg	810–110 mg/kg	180–100 mg/kg

3.3.3 Summary of Effects at Thebaud

Overall, this analysis shows that there were few significant differences between the near-field and far-field at Thebaud due to Field effects. Higher overall concentrations of barium and TPH were detected within the near-field. When effects within the near-field area are examined in detail, there appears to be significant natural variation at the 1,000 m distance, where slightly coarser sediments display lower concentrations of many elements than were observed at other distances.

Concentrations of TPH were significantly higher near the Thebaud platform at the 250 m and 500 m distance than at other distances with no apparent reduction in concentration along Axis 3.

Barium concentrations of up to 1200 mg/kg (two orders of magnitude over the background concentration) were detected at the 250 and 500 m distances near Thebaud from June 2000 to July 2002. After the June 2000 survey, most values were in the background range along the other axes.

3.4 Sediment Chemistry at North Triumph

3.4.1 Near-Field vs. Far-Field

For TPH, a significant difference was detected between near-field and far-field areas ($p < 0.001$), again indicating that TPH concentrations in the near-field have been higher overall than those in the far-field. There was also a significant difference due to Survey ($p < 0.001$), and a significant Field $\times$ Survey interaction ($p = 0.048$). The Survey effect indicated that TPH was higher in November 1999 than any other survey, and that the TPH concentrations measured in July 2002 were lower overall than at any other time. The interaction term indicated that TPH concentrations were higher in the near-field than in the far-field in November 1999 and June 2000. Significant differences between near-field and far-field at other times were not found.

For barium, a significant difference was detected between near-field and far-field areas ($p < 0.001$), indicating that barium concentrations in the near-field have been higher, overall, than those in the far-field. No significant effects due to Survey ($p = 0.408$) or the interaction term were detected ($p = 0.167$).

3.4.2 Near-Field Area

For TPH, the significant Distance effect ($p < 0.001$) indicated that TPH concentrations at the 250 m distance are higher overall than at 500, 1,000 or 3,000 m. Significant Survey effects ($p < 0.001$) indicate that the TPH concentration was higher in November 1999 (during drilling of the first or two wells) than in baseline surveys (November 1998 and June 1999), and post-drilling surveys in November 2000, June 2001 or July 2002. At 500, 1000 and 3000 m, the TPH concentrations from June 2000 to July 2002 were less than the baseline survey concentrations. There were no significant Survey effects at the 3000 m distance.

The significant interaction term showed that although there were significant differences due to Distance in November 1998 (baseline) or June 1999 (baseline), or in June 2001 or July 2002. TPH concentrations were elevated at 250 m on Axis 1, 5 and 7 from the drilling platform in November 1999, June 2000, and November 2000, declining to near baseline levels between 500 and 3,000 m distance. Ranges of TPH concentration at North Triumph are shown below in Table 3.5. Since 2000, there is apparently a considerable decrease in sediment TPHs within the 250 and 500 m distances compared to background levels (Table 3.5). TPH remains highest on Axis 7 in the direction of the prevailing current.

Table 3.5 Ranges in Total Petroleum Hydrocarbons Concentrations at North Triumph Near-Field Stations

Survey	Survey Period	250 m Radius	500 m Radius	1000 m Radius
2	November 1998	4.1–<2.5 mg/kg	5.6–<2.5 mg/kg	4.8–<2.5 mg/kg
3	June 1999	4.9–2.4 mg/kg	6.9–2.8 mg/kg	6.9–4.4 mg/kg
4	November 1999	2440–7.9 mg/kg	613–14.1 mg/kg	52.7–5.8 mg/kg
5	June 2000	3108–9.6 mg/kg	12.1–4.5 mg/kg	2.6–0.5 mg/kg
6	November 2000	73.8–0.4 mg/kg	26.7–<0.5 mg/kg	0.3–<0.5 mg/kg
7	June 2001	3.5–0.5 mg/kg	3.5–0.4 mg/kg	0.8–0.5 mg/kg
8	July 2002	163.7–<0.5 mg/kg	0.4–<0.5 mg/kg	<0.5 mg/kg

For barium, the significant Distance effect ($p=0.015$) indicated that concentrations were higher at the 250 m distance than at the 500 to 3,000 m distances. Significant Survey ($p<0.001$) effects indicated that the barium concentrations in November 1999 were higher overall than the baseline surveys in November 1998 or June 1999, as well as any following surveys. Barium concentrations since November 1999 have been declining. There is a continued decrease in barium levels in sediments within 250 m of the platform since 1999, however a peak appeared in 2002 along Axis 7 indicating that barium is persistent and drill wastes is patchy. Barium concentration beyond 250 m is stable and within background levels. Ranges in barium levels at North Triumph are shown below in Table 3.6.

Table 3.6 Ranges in Barium Concentrations at North Triumph Near-Field Stations

Survey	Survey Period	250 m Radius	500 m Radius	1000 m Radius
2	November 1998	200–140 mg/kg	200–170 mg/kg	180–140 mg/kg
3	June 1999	210–110 mg/kg	200–140 mg/kg	230–160 mg/kg
4	November 1999	1900–220 mg/kg	580–180 mg/kg	260–190 mg/kg
5	June 2000	1200–120 mg/kg	260–120 mg/kg	340–120 mg/kg
6	November 2000	550–140 mg/kg	270–150 mg/kg	270–160 mg/kg
7	June 2001	390–180 mg/kg	220–170 mg/kg	230–170 mg/kg
8	July 2002	820–99 mg/kg	220–170 mg/kg	200–170 mg/kg

3.4.3 Summary of Effects at North Triumph

The above results show that there were clearly increases in the barium and TPH concentrations near the North Triumph drilling platform after drilling activities began in 1999 (*i.e.*, within the 250 m and 500 m monitoring distances, but declining to near background levels at 1000 and 3000 m). Sediment chemistry at 250 m and beyond has recovered to background levels.

3.5 Sediment Toxicity

During 2002, the amphipod toxicity bioassay was used in standardised testing of marine sediments. The invertebrate test examines the survival of a marine amphipod (*Rhepoxinius abronius*).

3.5.1 Amphipod Survival

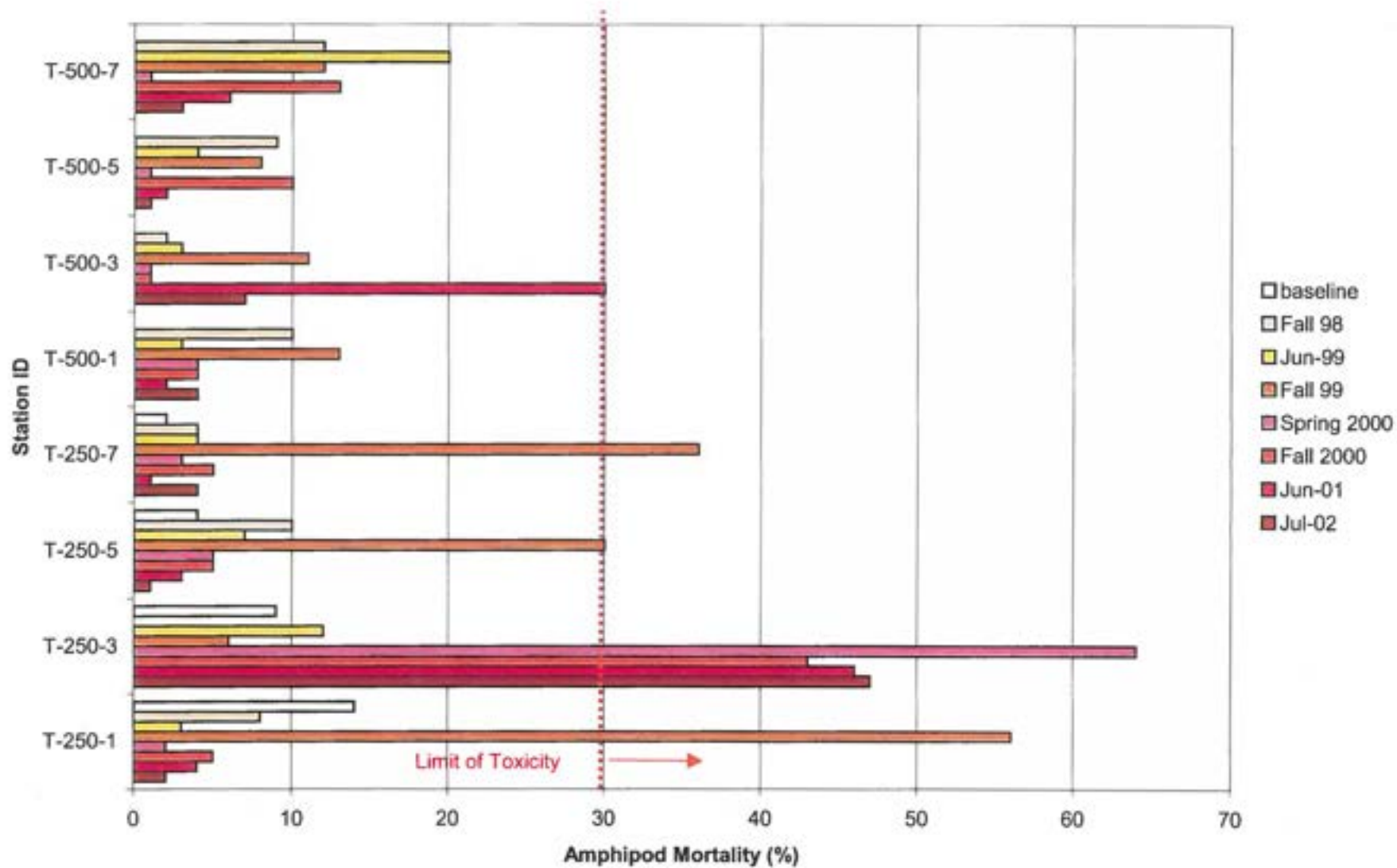
In 2002, amphipod survival tests on marine sediments have been carried out at stations 250 m, 500 m and 1000 m from the Venture, Thebaud and North Triumph platforms.

The toxic responses (amphipod mortality 30% or greater) that were observed were confined to the 250 m distances from the drilling platforms (Table 3.7) (Appendix C). At Thebaud, toxicity was observed on Axis 3, with decreasing toxicity after it was initially observed in June 1999. However, toxicity increased at 500 m in 2001 and remains persistent since 2000 at 250 m on Axis 3 (Figure 3.1). This result coincided with elevated TPH. High toxicity (95% mortality) was also observed at 250 m distance on Axis 7 in June 1999, but this observation was not repeated during 2000 to 2002. At North Triumph, moderate toxicity was observed at 250 m distance on Axes 1, 5 and 7 in June 1999, but no further toxicity was observed in 2000, 2001 or 2002.

Table 3.7 Amphipod Mortality Observed at Thebaud				
Station	Survey	Axis	Mortality	TPH (mg/kg)
T-250-3	3 (June 1999)	3	81%	1,550
T-250-7	3 (June 1999)	7	95%	586
T-250-3	5 (June 2000)	3	64%	487
T-250-3	6 (Nov 2000)	3	43%	449
T-250-3	7 (June 2001)	3	46%	360
T-250-3	8 (July 2002)	3	47%	468
T-500-3	7 (June 2001)	3	30%	564
T-500-3	8 (July 2002)	3	7%	146

There was no toxicity at North Triumph. For the first time, what appears to be sulphur-reducing bacteria, *Beggiotta* sp., blankets the seafloor around the platform (Photo 1). There is a zone immediately around the platform of about five metres where the sand is clear. The white mat radiates outward for approximately 50 metres evenly around the perimeter of the platform. There are no obvious organic overloading sources (eg. mussels fallen from the platform) and drilling ceased in 2000. A possibility maybe hydrocarbon seepage providing nutrients for bacteria. Crabs and flatfish were observed crawling or swimming over this material. Sediment sampling has not been conducted to date this close to the platform; however sampling in 2003 will include more video surveys, surficial sampling, toxicity and chemical analysis.

Thebaud Amphipod Morality



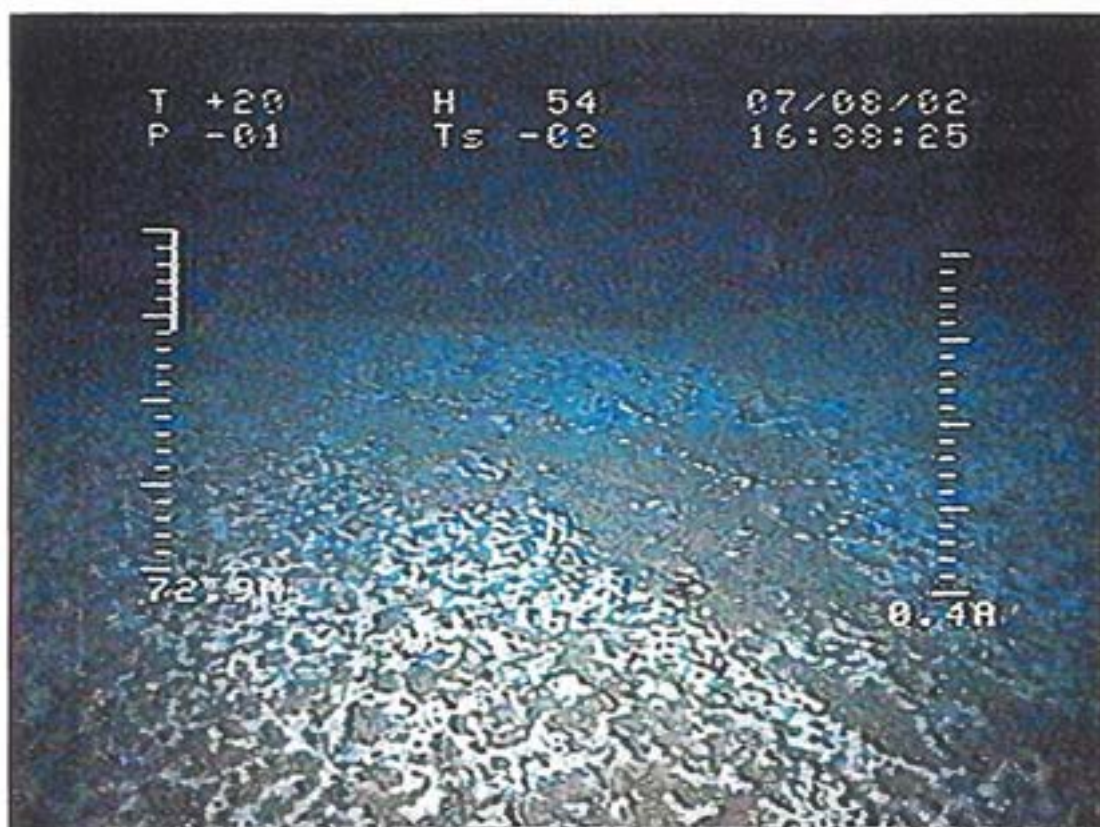


Photo 1 White Bacterial Growth Around the North Triumph Jacket

4.0 BENTHIC HABITAT AND COMMUNITY

4.1 Epibenthic Community

Epibenthic macroinvertebrate species were surveyed at each sampling site using still photography in an underwater frame and housing. The dynamic mobile nature of the sand seafloor at Venture and Thebaud exacerbates a traditional infaunal benthic community survey because the natural variability masks any sublethal chemical effects caused by drill waste discharges.

The predominant organisms observed during the baseline surveys included sand dollars and brittlestars, although small numbers of scallops, burrowing sea anemones, sea urchins, sea cucumbers, quahaugs, brittlestars, snow crabs, sea stars, flatfish, sculpins, Jonah crabs and thorny skates were also observed. Table 4.1 provides the densities of the various epibenthic biota observed in the underwater video.

The abundance of sand dollars and brittlestars was enumerated at Venture during the baseline (June 1998) survey, and in seven subsequent surveys (November 1998, June and November 1999, June and November 2000, June 2001 and July 2002). Summary statistics for the abundance of these organisms at each distance from the Venture field are provided in Table 4.2. For 2002, the abundance of sand dollars at Venture was low and variable (ranging from 0 to 1.5/m²) and the median abundance was generally low (0.4/m²).

Similar examination of the abundance of sand dollars and brittlestars at North Triumph and Thebaud (Table 4.2) shows a reduction in the density of sand dollars at Venture, Thebaud and North Triumph. The sediment chemistry does not support evidence that these organisms have been affected by drilling activities.

Table 4.1

Density of Epibenthic I

Station	Sand Dollars	Snow Crab	Scallops	Starfish	Jonah Crab	Sea Star	Thorny Skate
V250-1	0.31						
V250-3							
V250-5	0.16				0.22		
V250-7							
V500-1	0.42						
V500-3	0.21						
V500-5							
V500-7							
V1000-1	0.42						
V1000-3	1.25						
V1000-5	0.42						
V1000-7	0.21						
V15000-1	1.09						
V15000-3							
V15000-5			0.33				
T250-1							
T250-3							
T250-5	0.63				0.11		
T250-7	2.5						
T500-1	0.52						
T500-3	0.31						
T500-5	2.81						
T500-7							
T1000-1	0.98						
T1000-3	1.25						
T1000-5	0.94			0			
T1000-7							0.08
T3000-1					0.13		
T3000-3	9.38						
T3000-5	5.31						
T3000-7							
T6000-1							
T6000-3							
T6000-5	0.67				0.13	0.20	
T6000-7	1.72				0.17		
T20000-7	1.17		0.11		0.05	0.22	
NT250-1	0.31	0.06					
NT250-3	1.67	0.28					
NT250-5	1.00	0.19	0.74				
NT250-7	2.19	0.19					
NT500-1	1.98	0.28					
NT500-3							
NT500-5	1.25	0.14	1.33				
NT500-7	0.63						
NT1000-1	2.67	0.04					
NT1000-3							
NT1000-5	0.94	0.19	0.35				
NT1000-7	1.3						
NT3000-1	6.56		1.74				
NT3000-5	0.31	0.14					
NT3000-7	1.42	0.30					
NT5000-1	4.69	0.06					
NT5000-3	1.72						
NT5000-5	1.56						
NT5000-7	1.25		1.25				
NT20000-3	2.55	0.11					
NT20000-7	0.42	0.20					

Table 4.2 Abundance of Sand Dollar and Brittlestar at Venture, North Triumph, and Thebaud

Drill Platform and Survey Period	Sand Dollar (#/m ²)		Brittlestar (#/m ²)	
	Range	Median	Range	Median
Venture				
June 1998 (baseline)	0 – 46	2.6	0	0
November 1998	0 – 48	0		
June 1999	0 – 140	2.5		
November 1999	0 – 43	1.8		
June 2000	0 – 16	3.9		
November 2000	0 – 11	3.9		
June 2001	0 – 26	6		
July 2002	0 – 1.5	0.4		
North Triumph				
November 1998 (baseline)	0 – 33	7.1	0 – 128	9.5
June 1999 (baseline)	0 – 83	10.6	0 – 59	0.9
November 1999	0 – 38	0	0 – 66	0
June 2000	0 – 19	6.4	6 – 107	20
November 2000	3 – 41	9.4	0	0
June 2001	0 – 27	9.8	0 – 73	0
July 2002	0 – 9	1.6	0-13	0.3
Thebaud				
June 1998 (baseline)	0 – 163	3.6	0	0
June 1999	0 – 57	0.26		
November 1999	0 – 107	2.5		
June 2000	0 – 92	4.4		
November 2000	0 – 49	18.9		
June 2001	0 – 94	16		
July 2002	0 – 9.4	0.9		

4.2 Infaunal Community

Major Taxa

Gastropoda, bivalvia, polychaeta, echinoidea, ophiuroidea, amphipoda, cumacea, isopoda and nematoda were the main taxa present in 2002 benthic grab samples around the North Triumph platform. Samples were collected at 250 m, 500 m and 1000 m from the platform along the four main axes. Table 4.3 presents the major taxonomic composition of each sample on the four axes.

Table 4.3 Major Taxa at Each Sampling Station on Each Axis (as % of total)

Taxa	250 M				500 M				1000 M		
	1	3	5	7	1	3	5	7	1	5	7
Gastropoda	0.0	0.0	2.0	0.0	0.0	5.0	2.8	0.0	2.4	4.2	1.1
Bivalvia	0.0	2.9	2.0	0.0	0.0	10.0	4.2	11.1	2.4	4.2	6.6
Polychaeta	88.2	45.7	64.7	25.0	50.0	45.0	51.4	55.6	54.8	62.5	60.4
Echinoidea	5.9	8.6	0.0	25.0	5.9	5.0	2.8	11.1	0.0	4.2	1.1
Ophiuroidea	0.0	17.1	5.9	25.0	0.0	0.0	2.8	0.0	11.9	0.0	9.9
Amphipoda	5.9	17.1	21.6	25.0	17.6	10.0	26.4	22.2	21.4	25.0	15.4
Cumacea	0.0	8.6	3.9	0.0	26.5	25.0	9.7	0.0	2.4	0.0	4.4
Isopoda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	1.1
Nematoda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0

Overall, polychaeta dominate the taxonomic composition of the samples with percent composition ranging from 25 to 88.2% of the samples. Amphipoda are also common with percent composition ranging from 5.9 to 26.4% of the samples.

A comparison of the stations on the different axes at 250 m from the platform show that polychaetes dominate Axes 1, 3 and 5 while the taxa at the station on Axis 7 are equally distributed (Figure 4.1).

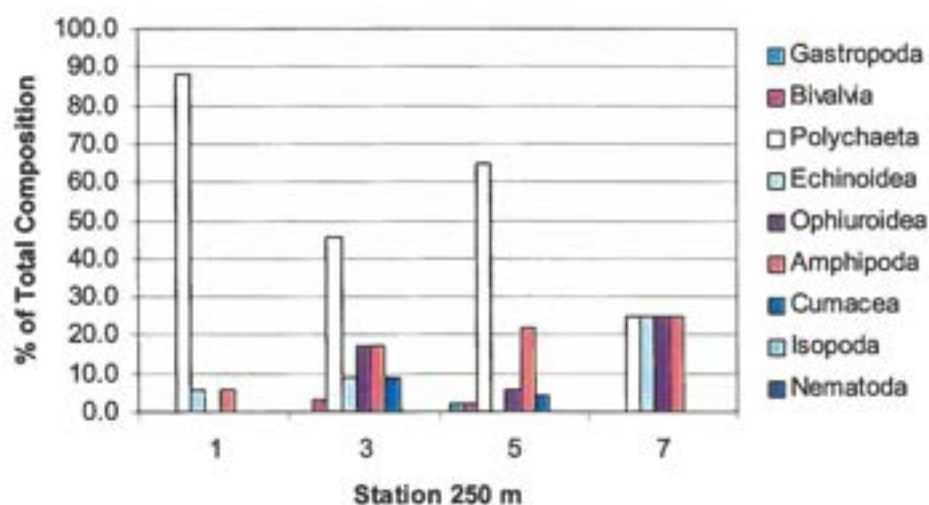


Figure 4.1 Percent Composition of Major Taxonomic Groups on Each Axis, 250 m From the Platform

The concentration of barium and hydrocarbon is highest at Station 250-7 and still shows elevated levels above background at 820 mg/kg and 163.7 mg/kg, respectively. The effects seen could represent a toxic response to polychaetes and cumaceans, and an enrichment effect on echinoderms, ophiuroids and perhaps amphipods.

A comparison of the stations on the different axes at 500 m from the platform show that polychaeta dominate axes 1, 3, 5 and 7 (Figure 4.2). Amphipoda are distributed in all four stations while cumacea are found only in axes 1,3 and 5.

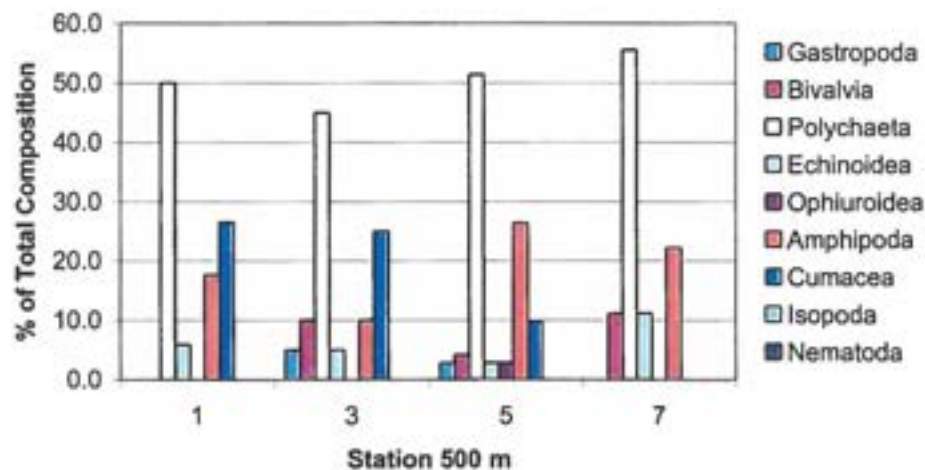


Figure 4.2 Percent Composition of Major Taxonomic Groups on Each Axes, 500 m From the Platform

There were no data for the station on Axis 3 at 1000 m from the platform. A comparison of the stations on the different axes at 1000 m from the platform show that polychaeta dominate Axes 1, 5 and 7 (Figure 4.3). Amphipoda are distributed in all stations. Overall there are more taxa per station for stations located 1000 m from the platform.

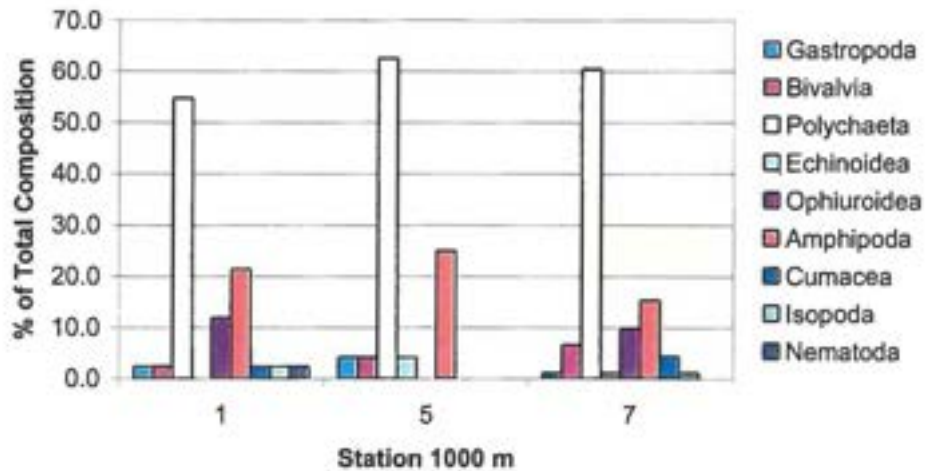


Figure 4.3 Percent Composition of Major Taxonomic Groups on Each Axis, 500 m From the Platform

Number of Organisms/Species in Relation to Distance from Platform

The infauna data were plotted, by axes, and the number of organisms or species/sample in relation to distance from the platform. Figure 4.4 and 4.5 presents the results of this analysis.

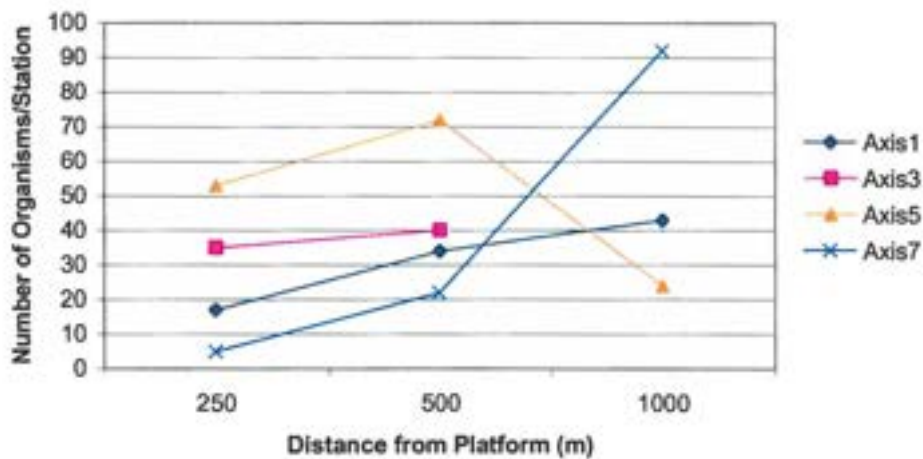


Figure 4.4 Number of Organisms Per Station as a Function of Distance From the Platform

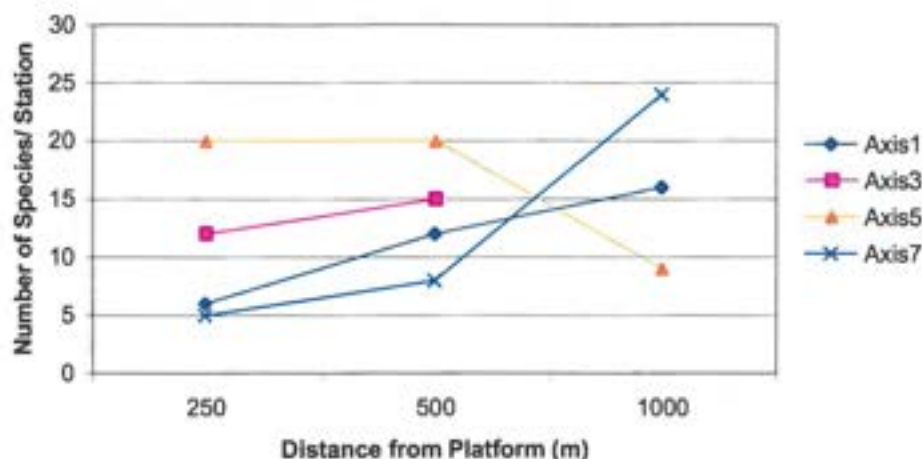


Figure 4.5 Number of Species Per Station as a Function of Distance From the Platform

Along Axes 1 and 3 there is a slight increase in the abundance per station as the distance from the platform increases (Figure 4.4). Along Axis 5, there is an increase in abundance per station between 250 and 500m from the platform. However the station located at 1000 m from the platform registered the lowest number of organisms along the whole axis. Along Axis 7 there is a sharp increase in the abundance per station as the distance from the platform increases.

Along Axes 1 and 3 there is a slight increase in the species number per station as the distance from the platform increases (Figure 4.5). Along Axis 5, the station located at 1000 m from the platform registered the lowest number of species. Along Axis 7, there is a sharp increase in the species number per stations as the distance from the platform increases, especially between stations located at 500 and 1000m.

Figure 4.6 shows a decrease in the number of organisms of each dominant taxa at station 250-7 in relation to the other stations. The most noticeable difference is in the number of polychaetes found in all stations except 250-7. Amphipods appear to decrease as well. Station 250-5 contains the highest number of organisms.

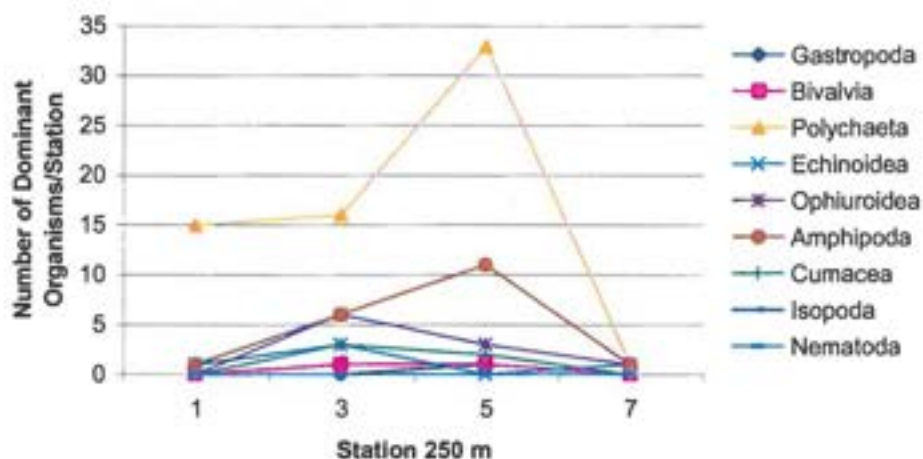


Figure 4.6 Number of Organisms Per Station at 250 m From the Platform

Figure 4.7 shows a decrease in the number of organisms of each dominant taxa at station 500-7 in relation to the other stations. The most noticeable difference is in the number of polychaeta found in all stations except 500-7. Station 500-5 contains the highest number of organisms.

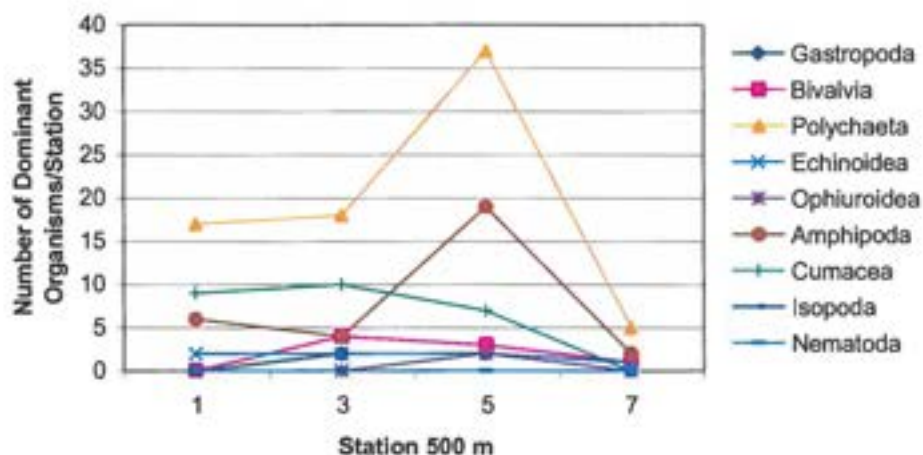


Figure 4.7 Number of Organisms Per Station at 500 m From the Platform

In Figure 4.8 the number of polychaetes per station which is similar on Axes 1 and 5 but increases at Station 1000-7.

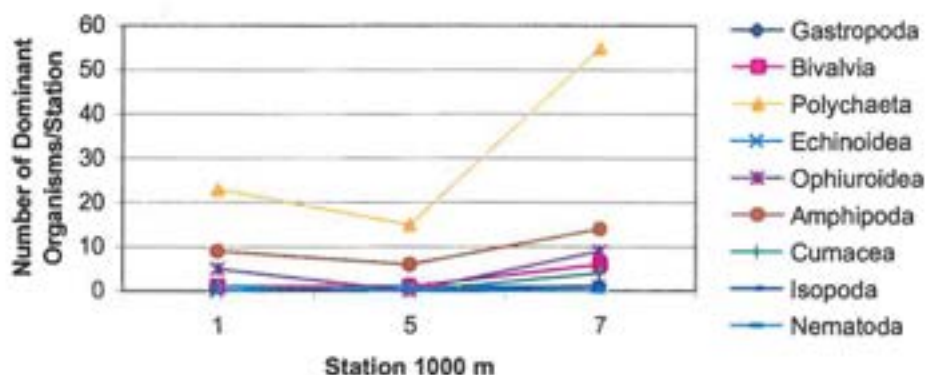


Figure 4.8 Number of Organisms Per Station at 1000 m From the Platform

The statistical analyses and residual plots of this EEM component are provided in Appendix A. Infaunal macroinvertebrate species lists for baseline and post-drilling surveys are provided in Appendix D. One way ANOVAs were computed to detect any changes in abundance per station or number of species per station as a function of distance from the platform (all axes combined) (Table 4.4).

Table 4.4 Test for Significant Differences Due to Distance From Platform, using ANOVA

Variable	Factor	F-Ratio	p value	R ²
# of species/station	Distance	0.655	0.545	0.141
# of organisms/station	Distance	0.890	0.448	0.182

The analyses show that there is no significant differences between abundance or species per station due to distance from the platform (250 to 1000 m). The next step is to compare the number of organisms or species as a function of the distance from the platform along a single axis. However, this analysis is not possible as the number of observations (degrees of freedom) falls to 3.

Nested ANOVAs were performed on pre- and post-drilling (Survey effect) and direction (Axis effect). The nine most abundant species were analyzed in order to detect any trends (increase, decrease, neutral). The species included the polychaetes: *Aglaophamus circinata*, *Nicomache lumbricalis*, *Ophelia limacina*; the cumacean: *Diastylis sculpta*; the echinoderm: *Echinarachnius parma* and *Ophiura sarsi*; and the amphipods: *Ampleliscia macrocephala*, *Corophium crassicorne* and *Uricola irrorata*. Results are presented by species. The number of individual of each species per sample site was transformed using $\log_{10}(1+n)$.

For *A. circinata*, neither Survey time nor Axis contributed to changes in the abundance. The low R^2 value is a reflection of this as this model explains only 4.3% of the variability in the *A. circinata* dataset. There were no apparent significant differences in abundance of *D. sculpta*, *O. limacina*, *E. parma*, *C. crassicornis* resulting from Survey or Direction effects.

The Survey effect contributed to significant changes ($p=0.004$) in the number of *N. lumbricalis*. The abundance of this polychaete decreased following drilling. The post-drilling dataset was evaluated to detect changes relative to distance and axis. The residual plots show a non-significant increase ($p=7.47$) increase in abundance at 1000 m and a near significant effect ($p=0.066$) with higher abundance on Axis 5 compared to Axes 1, 3 and 7.

The abundance of the brittlestar *O. sarsi* was significantly affected by Survey ($p<0.001$) in a decrease in number after drilling commenced. However, the difference could not be explained by Distance ($p=0.568$) or Axis ($p=0.926$) from the platform.

The abundance of the amphipod *A. macrocephala* was significantly affected by Survey ($p<0.001$) and Axis ($p=0.008$). The numbers of animals decreased during the post-drilling surveys and they were lower on Axes 1 and 7. There were no significant effects during the post-drilling surveys from Distance or Axis.

5.0 MARINE GROWTH AND HABITAT ASSOCIATED WITH TIER I OFFSHORE FACILITIES

In 1998, production jackets were pile driven into the seafloor providing a stable complex of habitat through the entire water column. Protective mattresses were laid on the interfield pipelines in 1999. The interfield pipelines were buried rendering them unavailable for marine growth. The main pipeline to Goldboro was laid from November 1998 to November 1999; portions of this pipeline are exposed allowing colonisation by marine epilithic and benthic organisms.

In 1997, Jacques Whitford Environment Limited and CEF Consultants provided ExxonMobil with an evaluation of effects on fish habitat from construction and operation phases of SOEP from seven production platforms, the trunkline, interfield pipelines, and drilling cuttings piles. DFO agreed with the report that the habitat affected by the interfield and main production pipelines will be compensated for by growth of attached biota on exposed portions of the pipelines. However, DFO requested that a compensation plan be submitted to address loss of fish habitat resulting from the deposition of drill wastes on the seafloor.

5.1 Drill Cutting Pile Surveys

Drilling waste piles are an accumulation of drilling muds and cuttings deposited when wells are drilled at each production platform. Their height and spatial extent were largely determined by the height within the water column at which these solids are released, and the prevailing oceanographic conditions.

Modelled predictions of drill cuttings anticipated the formation of piles at Venture and Thebaud to have maximum heights of 3.5 and 1.0 m, respectively, spreading out to 1 mm thickness approximately 600 m from the center point of each platform (MacLaren Plansearch 1997a). A smothering depth of one centimetre was used as the limit for the area of direct habitat loss beneath each drilling pile, although effects may occur at thicknesses less than one centimetre (Bakke *et al.* 1989). For these shallow sites, the radius of the one centimetre deposition corresponds to approximately 156-200 m (MacLaren Plansearch 1997a, 1997b).

At the deeper North Triumph site, maximum predicted accumulation of cuttings at the discharge point was predicted to be 0.5 m for three drilled wells, decreasing in thickness rapidly to 1 mm within a distance of much less than 500 m from the centre point. The area of the drilling pile at one centimetre thickness was modelled to be a circle with a radius of 50 m. Only two wells were drilled at North Triumph. SBM drill cuttings from the second well were skipped and shipped back to shore for disposal. ROV inspections showed that no cutting pile was evident at North Triumph.

It was predicted that habitat lost as a result of the accumulation of drilling wastes may require between two and four years to recover (MacLaren Plansearch 1997a). This time frame was based on the time required for the pile to accumulate (generally less than a year), and the different effect that sediment transport has on the piles at different depths. The environmental assessment report anticipated that drilling wastes would be dispersed at the shallow sites in about one year, but dispersion at deeper sites is known to take longer and thus overall habitat loss has estimated at three years (MacLaren Plansearch 1997a). Table 5.1 contains the area of predicted habitat loss at shallow (20 m) and intermediate (30 m)-depth and deep (80 m) sites based on a one centimetre thickness and a circular impact zone.

Table 5.1 Habitat Affected By Drilling Waste Piles at Shallow/Intermediate Depth and Deep Sites

Site Depth	Area Affected (m ²)	Area Affected (ha)
shallow/intermediate (20-30 m)	125,664	12.6
deep (80 m)	7,854	0.8

5.1.1 Operational Storm Scour Surveys

As part of the post-storm scour survey around the drill rigs and jacket legs using a remotely-operated vehicle (ROV), a quantitative assessment of cuttings pile was possible at Venture and Thebaud.

Venture

ExxonMobil's Subsea Coordinator provided cuttings pile dimensions at Venture from sixteen ROV surveys. The highest point of the pile appears to be centred around the east drive rack on the starboard leg of the RG II. This pile formed below the drill cuttings discharge pipe. The edge of the drilling returns around the starboard leg were measured by sonar and visual estimations using the ROV. Table 5.2 provides the dimensions of the drill waste pile over each of the six surveys.

Table 5.2 Dimensions of the Drill Waste Pile at Venture

Date	Pile Height (m)	West (m)	South (m)	East (m)	North (m)
Sept. 20, 1999	3	22	25	70	n/d
Oct. 17, 1999	3	22	26	66	60 (NE)
Oct. 20, 1999	3	22	25	66	58 (NE)
Dec. 6, 1999	3	23	22	57.3	60 (NE)
Date	Pile Height (m)			Length (m)	Width (m)
July 27, 2000	2.5			50	60
3 rd quarter, 2001	1			40	40

Table 5.2 Dimensions of the Drill Waste Pile at Venture

Date	Pile Height (m)	West (m)	South (m)	East (m)	North (m)
1 st Quarter, 2002	1			40	40
Feb 6, 2002	1			40	40
Feb 12, 2002	1			40	40
Feb 19, 2002	0.5			5	8
2 nd Quarter, 2002	1			40.5	40
June 02, 2002	1			37	25
3 rd Quarter, 2002	1			37	25
Dec 6, 2002	0.5			13	13.5
Dec 31, 2002	0.5			18	18
4 th Quarter, 2002	1			6	40

NE refers to Northeast direction from discharge point.

The method of data collection and recording changed in 2000 compared with previous years, and no direction of cuttings pile spread was provided. However, it appears that the cuttings pile height and areal extent decreased since cessation of cutting discharge and stabilized at 40 m or less in diameter.

Thebaud

Six post-storm scour surveys were conducted at the Thebaud field on November 5 and 25, 1999, September 1, 2000, November 26, 2000, 3rd and 4th quarters of 2001. Following drilling on the first of two holes, the entire Thebaud wellhead appears to be encompassed by the cuttings from information provided by the operator of the ROV. Table 5.3 provides the dimensions of the drill waste pile over the four surveys.

Table 5.3 Dimensions of the Drill Waste Pile at Thebaud

Date	Pile Height (m)	West (m)	South (m)	East (m)	North (m)
Nov. 5, 1999	1	43	29	32	22
Nov. 25, 1999	1	34	29	46	15
Sept 1, 2000	1.2	35	n/d	50	n/d
Nov 26, 2000	1.5	n/d	n/d	n/d	n/d
3 rd quarter 2001	1	30	n/d	30	n/d
4 th quarter 2001	1	42.3	n/d	40	n/d

nd = no data provided

At leg A2 of the wellhead platform, in 1999 the cuttings pile appears to be one metre in height. Directionality of the cuttings pile was not provided in 2000, the lengths and width provided are inserted into the table where most appropriate. Considering the pile height is estimated visually using the ROV, the apparent increase in height is likely an estimation error. Most important are the horizontal dimensions. There is no significant change in pile dimensions since November 1999.

5.1.2 Biological Survey

A remotely-operated vehicle (ROV) inspection of the drill cuttings and marine growth on the jacket legs were conducted at Venture, Thebaud and North Triumph. Information on the cuttings pile is obtained from the quarterly operational inspections undertaken by ExxonMobil's Diving Contractor to evaluate scouring around the jacket legs. However, biological information relative to habitat required a separate survey conducted by JWEL marine biologists with the assistance of Pro-Dive Marine Services.

The purpose of the surveys at Thebaud and Venture was to collect information on the persistence of the cuttings pile. At North Triumph, there is no residual cutting pile to investigate. Large numbers of snow crab were observed at the base on the North Triumph jacket legs in the 2000 and 2001 EEM surveys which warranted further study. Opportunistic observations on marine growth were also made to determine 'reef' development and aggregation of marine biota.

Up to 2001, the cutting pile at Thebaud was distinct and persistent (Photo 2). Samples of the material were obtained by attaching stainless steel Shelby tubes to the ROV to extract cores from the side of the pile. Tactile manipulation of the material showed a putty consistency, which, in part, explains its persistence. Geotechnical analysis of samples revealed the cutting material to consist 30.9% sand and 69.1% silt and clay. The colour of the cuttings was light grey.



Photo 2 **Jonah Crabs Nestle into Thebaud Drill Cutting Pile**

The 2002 ROV survey at Thebaud showed no evidence of the cutting pile. Either winter storms finally eroded away the pile or it was buried by sand waves. Future EEM surveys will continue to monitor this area, even though the occasional drilling occurring at Thebaud now uses only water-based mud.

The drill cutting pile at Venture was filmed in 2002. Its height is unchanged since 1999 observations. The maximum radius measured by sonar was 40 m, considerably smaller than the 200 m radius predicted in the environmental assessment report (MacLaren Plansearch 1997a). Several concrete mattresses are imbedded in the pile and likely contribute to its persistence. The cuttings piles at these shallow water sites were predicted to last for only one year. Present surveys show that the Venture cutting pile persists even after four years post-drilling. As observed at the Thebaud site, crabs have burrowed into the side of the cutting pile.

5.2 Production Platforms

SOEP's Tier I phase includes three steel jacket-type constructed platforms: Venture, Thebaud and North Triumph. Anti-scouring and protection mattresses were placed over interfield line tie-ins. During the operational phase of this project, the platforms and mattresses were predicted to affect fish habitat both positively and negatively. The positive aspect of these structures were to provide a substrate on which biofouling communities can develop and to create fish habitat. In addition to creating fish habitat, the fouling communities expected to be established would serve to enhance surrounding fish populations by providing additional food, as research at the University of Aberdeen has suggested (Parks 1996).

Remotely-operated vehicle (ROV) inspections are undertaken by contracted commercial diving companies for the annual environmental effects monitoring surveys and quarterly scour surveys around the platforms. Information on biofouling development was obtained from the inspection videos. Diving for biota samples is not permitted.

Values for biomass of attached biota were obtained from data collected on the Rowan Gorilla I (Dobrocky Seatech Ltd. 1986). From this work and for determination of biomass loss and gains in this project, the standing crop of attached marine sessile invertebrates and algae on an offshore platform is considered to be 2,185 g/m² (wet wt).

5.2.1 Jackets

The legs and cross members of the Venture jacket provide approximately 3,200 m² of surface area. Colonisation by marine biofouling organisms has the potential to produce 6,906 kg (wet wt) or more of growth (JWEL and CEF 1997, JWEL 1999). The production of pelagic fish species cannot be accurately determined. The Thebaud jacket may provide 4,900 m² of habitat for attached marine organisms which may produce 10,574 kg (wet wt). The North Triumph jacket legs and cross members could provide 6,800 m² of potential colonising surface and 14,858 kg (wet wt) or more of growth.

Marine colonisation extends from the surface to the seafloor at all three platforms, with some cleansing scour of the bottom few metres of the jacket legs at the Venture (20 m water depth) and Thebaud (30 m water depth) platforms from abrasive sand during storm events.

The marine growth exhibits very little zonation relative to water depth at Venture and Thebaud. Blue mussels (*Mytilus edulis*) appear to be the dominant organism on the entire jacket legs and cross members of Venture (Photos 3 & 4) and Thebaud platforms. The dense coverage by mussels appears to be 100% of the available surface.

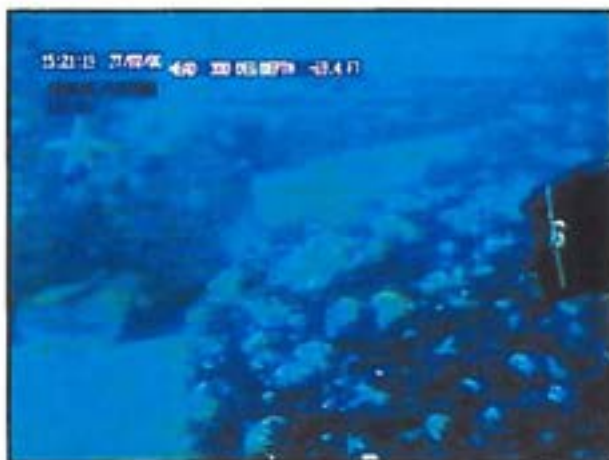


Photo 3 Mussels on Venture Jacket



Photo 4 Mussels and Associated Marine Life at Venture Platform

Seaweeds are not prolific in the upper waters, the aggressive mussel growth prevents large algae species (eg. kelp) from establishing. Filamentous green (eg. *Spongomorpha lanosa* and *Entromorpha intestinalis*) and brown algae are seen above the mussel layer in the intertidal zone (Photo 5) and down the legs. *Chorda filum* was also observed intermittently along the legs. Mechanical removal of marine

fouling is not undertaken by ExxonMobil. Self-sloughing was noted during a mussel collection trip in 2001 when mussels were absent in the upper 2-3 metres of the platform legs. Large mats of mussels were also observed on the sandy seafloor next to the jackets (Photo 6).



Photo 5 Filamentous Algae on a Thebaud Platform Leg



Photo 6 Snow Crabs and Sea Stars Feeding Upon Mussels at North Triumph

Other species observed on the jacket structures include pelagic gooseneck barnacles (*Lepas* spp.), stalked sea anemones, hydroids (eg. *Campanularia* spp. and *Tubularia crocea*), bryozoans, sea stars (*Asterias* spp.), encrusting sponges, gammarid amphipods, Arctic clam (*Hiattella arctica*), and polychaetes (eg. *Nereis* spp.).

The biomass of biofouling organisms on each platform was not determined because of sampling difficulties and logistics. However, based on the surface area available for colonisation and the apparent complete coverage by marine sessile organisms, it can be estimated that the 14,900 m² of total jacket surface could provide 32,338 kg (wet wt) or more of marine biomass.

At North Triumph, the biological zonation down the jacket legs is better defined than the shallower platforms. At about 45 m depth, the encrusting dense growth of mussels and barnacles give way to patches of hydroids which dominate the marine growth to the seafloor at 75 m. From 45 m to 75 m depth, approximately 50% of available leg surface is covered. Orange-footed sea cucumbers are common along the bottom brackets of the North Triumph jacket legs (Photo 7).



Photo 7 Sea Cucumber with Feeding Tentacles Extended on North Triumph Structure

Fish were prolific at times during the ROV surveys. Schools of adult and juvenile gadoids (pollock) were observed at Thebaud and Venture swimming close to the bottom among the legs and cross members (Photo 8 & 9). Cunners were common throughout the water column and a cod was observed at Venture during the 2002 cutting pile survey. Fish have not been seen at North Triumph; however, during the 2002 EEM ROV survey, two minke whales were diving repetitively around the survey supply vessel adjacent to the platform and among the jacket legs and cross members.

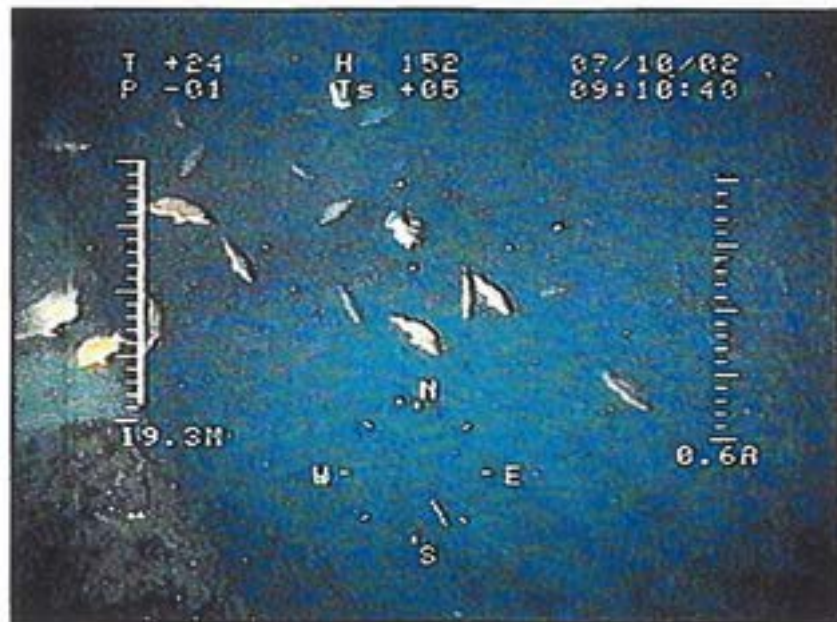


Photo 8 Schools of Cunner and Pollock Aggregate Around the Venture Structures



Photo 9 Pollock Around the Thebaud Platform

5.2.2 Mattresses

Two types of mattresses were placed on the seafloor: protective and anti-scour. Protective mattresses were laid over exposed pipeline adjacent to each platform to protect the pipeline from damage by activities associated with the jacket operation. The mattresses are composed of concrete blocks attached with ropes cast into the blocks (Photo 10 & 11, Figures 5.1 & 5.2). Around the perimeter of the concrete blocks is a single row of larger tapered-edge concrete blocks.



Photo 10 Protective Mattresses



Photo 11 Anti-Scour Mattresses—Note Plastic ‘Seaweed’ Fronds

Anti-scour mattresses were placed in areas where sediment transport may cause scour around the jacket legs and tie-in points. These mattresses have plastic fronds attached that mimic seaweed to enhance accumulation of sand particles. Considering these mattresses are installed under the pipeline, they are buried and not available for colonisation by marine organisms.

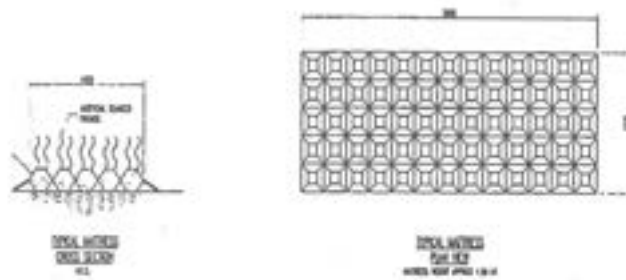


Figure 5.1 Schematic of an Anti-Scour Mattress

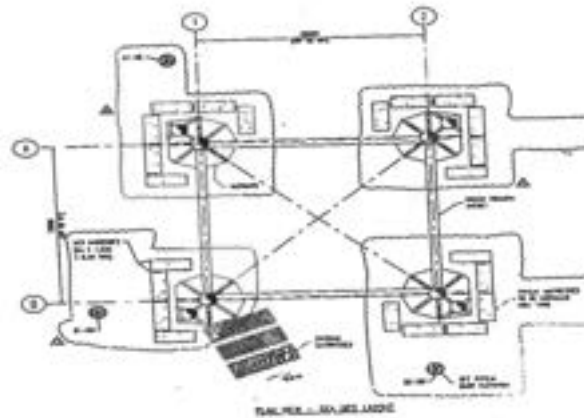


Figure 5.2 Placement of Mattresses Around a Platform

Thebaud Site

Three gas lines are associated with the Thebaud facility. The 660 mm gas gathering line and the 323.9 mm and 457 mm gas flow lines have mats that cover 2,385 m² of seafloor which accounts for about 668 kg (wet wt) of benthic biomass. However, the mattresses create 39,315 m² of hard surface substrate which could support 85,903 kg (wet wt) of colonising organisms.

Photo 12 shows dense sea cucumbers colonisation of protective mattresses at Thebaud. These aggregations may be spawning or refuge seeking induced. They may be drawn to these project structures from elsewhere as they are not considered a common organism of the benthic community on Sable Island Bank. Other mobile organisms observed in fewer numbers include Jonah crabs, hermit crabs and sea stars, all likely feeding upon blue mussels. Of interest is the lack of epilithic growth. The same organisms that occupy the jacket legs should theoretically also be covering the concrete mattresses.



Photo 12 Sea Cucumbers Infest the Mattress Blocks (Thebaud)

The predicted biomass of marine organisms utilizing the mattresses was based on epilithic sessile organisms such as algae, sponges, anemones, barnacles, hydroids and tunicates. Nevertheless, it is apparent that motile organisms are the dominant group. The wet weight of an orange-footed sea cucumber is approximately 150 g and assuming that 25% of the area is covered by these animals, and there are 10 sea cucumbers/m², sea cucumbers account for approximately 15,000 kg of biomass. Following four years from installation, this biomass and the time frame for colonisation is considerably less than what was expected; however not all species occupying the mattresses are accounted for. The concrete mattress blocks appeared almost clean as the day they were installed. Scouring from sand particles in storms or periodic burial may keep the block free of sessile growth. The high pH of the concrete may also inhibit development of certain marine species.

Venture Site

For the 457 mm gas flow line there are two sets of protective mattresses. In total, these mattresses could cover 1,320 m² of sandy sediment and 370 kg (wet wt) of benthic biomass. However, the mattresses provide 21,750 m² of hard substrate for colonization. Using the estimated standing stock above, potential total biomass from growth on these mats was calculated at approximately 47,000 kg (wet wt).

At Venture, the sand and the cuttings pile covers the majority of the protective mattresses and only the tops of the concrete blocks are exposed. Approximately half of the block surfaces are colonised by some form of epilithic filamentous red and brown algae and organisms (eg. bryozoans) (Photo 13). Sparse growth of the red algae *Ptilota serrata* was observed in the 2002 EEM ROV survey. Sea stars, sea cucumbers, juvenile fish, sculpins, flatfish and crabs were observed nestled among the blocks. Schools of juvenile fish, pollock and cunner were abundant among the mattresses and Venture

infrastructure. An estimated biomass of marine organisms (not including sea stars, fish or crabs) for 10,875 m² of available artificial habitat is approximately 23,500 kg.



Photo 13 Epibenthic Algae and Organisms on a Venture Protective Mattress

North Triumph Site

The 324 mm gas flow line from North Triumph is protected by mattresses. Twenty-two anti-scour mattresses were placed around the perimeter of the jacket legs. The mats cover 482 m² of habitat and 135 kg (wet wt) of benthic standing crop. However, the concrete blocks provide 5,681 m² in colonising surface and 12,413 kg (wet wt) of potential standing stock.

The mattresses at North Triumph have attracted large numbers of snow crabs, some toad crabs, sea cucumbers and sea stars. Photos 14 to 16 show these aggregations. As seen in the photographs, epilithic growth appears to be limited to patches of diatom-type growth. Due to their highly mobile nature, estimating the biomass of crabs is not reliable. The recolonisation of the deep water mattresses by sessile biota may take considerably longer, if at all, than predicted in the environmental assessment (MacLaren Plansearch 1997a).



Photo 14 **Aggregation of Snow Crabs Around the Mattresses at North Triumph**



Photo 15 **Sea Stars and Sea Cucumbers on the Mattress Blocks at North Triumph**



Photo 16 Snow Crabs, Sea Stars, Basket Stars and Sea Cucumbers on a North Triumph Mattress

In 2002, mussels were found among the protective mattresses in more dense patches than previous surveys. This depth is typically too deep to grow, however they may be colonizing the hard surface of the mattress blocks. Orange-footed sea cucumbers, snow crabs, sculpins, sea stars, were also present in association with the mattresses on the seafloor (Photo 17).



Photo 17 High Diversity and Abundance of Marine Biota Associated with the Protective Mattresses at North Triumph

5.3 Main Offshore Pipeline

From the central offshore processing facility at Thebaud, the dehydrated gas and hydrocarbons are transported to landfall in Country Harbour via a two-phase pipeline. This pipeline is 197 kilometres long and a diameter of 660 mm. It was externally coated for corrosion protection and concrete-coated for negative buoyancy and on-bottom stability, creating a final outside diameter of approximately 840 mm. The main offshore pipeline was trenched in shallow water and placed directly on the seabed in deep water (>60 m). From the annual ROV inspection, approximately 113 km of pipeline is exposed from KP 8 to KP 120 (Appendix E).

The most recent survey in the spring of 2002 showed that there is very little epilithic growth of flora and fauna on the concrete surface of the pipeline. This is the same condition as observed on the concrete mattresses. An explanation maybe the basic (pH 11) nature of concrete coating may inhibit attachment of some marine organisms. The main taxa groups observed in the videos included sea stars (*Asterias* spp., sun stars, basket stars), crabs (snow, toad, rock and Jonah crabs), anemones (northern red anemone), fish (gadoids, flounders, sculpins, wolffish), sea cucumbers, algae and sea pens. Photos 18 to 21 show representative specimens. Along the entire pipeline, 11,886 animals were counted and identified. Appendix E lists every species observed along exposed portions of the pipeline. Sea cucumbers and sea stars were the most abundant animals observed on the pipeline. Between KP 100 and KP 106, 4821 sea cucumbers were counted. In some areas (KP 107 to KP 120), sea cucumber coverage was 100 % over the pipeline and too numerous to enumerate. Despite the slow development of epilithic biomass on the pipeline, the number of species and their abundance is greater than observed on the surrounding seafloor.



Photo 18 **Snow Crab on the Main Pipeline**

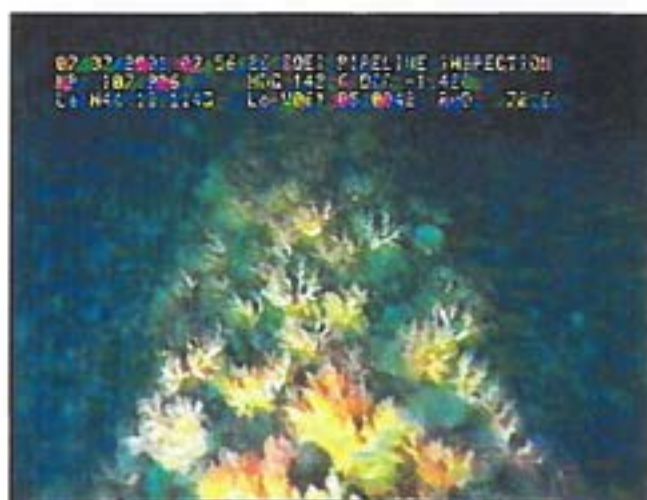


Photo 19 A Plethora of Sea Cucumbers on the Main Pipeline

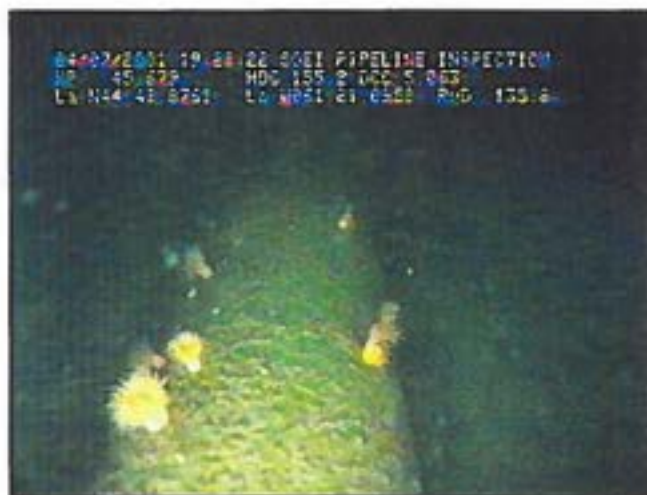


Photo 20 Sea Anemones on the Main Pipeline

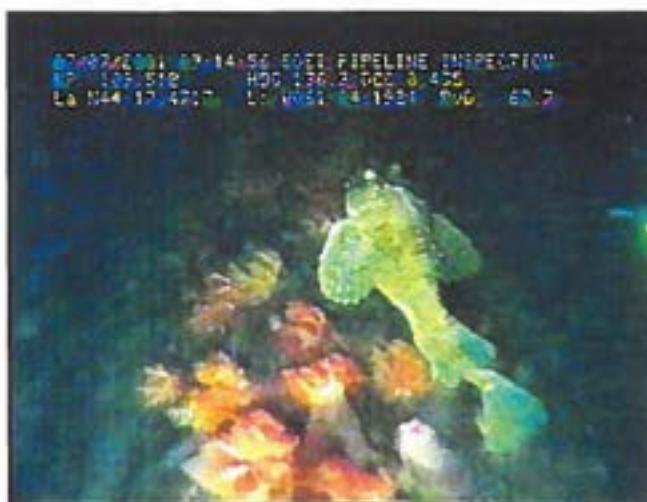


Photo 21 Sculpin and Sea Cucumbers on Main Pipeline

5.4 Summary

The use of video and still photography to record the abundance of benthic epifauna is a practical tool for monitoring purposes. However, the abundance of these organisms tends to be patchy and may be highly variable both spatially and over time. Hence, although these organisms are readily identified and counted in photographic images, the statistical power to detect change in the environment is inherently low. Sand dollars are common and ubiquitous on Sable Island Bank. Brittlestars were common at North Triumph, but not at Venture or Thebaud. Other organisms were observed too rarely to be considered useful for monitoring purposes.

Drill wastes deposited on the seafloor from seafloor returns and surface releases of drill cuttings and mud formed cuttings piles at the Venture and Thebaud platforms. A cutting pile was not created at North Triumph. The modeled size of the Venture and Thebaud cuttings piles ranged from 156 to 200 m radius at a one centimetre thickness. Monitoring showed the cuttings piles to be 40 to 70 m in radius. Table 5.4 presents the predicted and actual areas affected by the drilling cuttings pile at all sites.

Table 5.4 Habitat Affected by Drilling Waste Piles at Tier I Platforms

Site Depth	Predicted Area Affected		Actual Area Affected	
shallow/intermediate (20-30 m)	125,664 m ²	12.6 ha	20,419 m ²	2.0 ha
deep (80 m)	7,854 m ²	0.8 ha	0	0

Approximately one sixth of the habitat at Venture and Thebaud, combined, that was modelled to be affected was actually covered by drill wastes. Therefore 5,717 kg (wet wt) of benthic biomass instead of 35,185 kg (wet wt) originally calculated, may be affected (assuming that the standing stock on the Scotian Shelf to be 280 g/m² (JWEL 1999)).

The platform jackets at Venture and Thebaud are virtually 100% covered from the sea surface to the seafloor in marine growth. Only the bottom few metres on each leg have sparse coverage, likely due to sand scouring. The jacket at North Triumph is completely encrusted to about 45 m below which the growth covers about 50% of the legs and cross members. The surface area of Venture is about 3,200 m² (0.3 ha), 4,900 m² (0.5 ha) at Thebaud and 6,800 m² (0.7 ha) at North Triumph. In total, this surface area accounts for approximately 28,486 kg (wet wt) of growth observed on the jacket structures (taking into consideration the lower half of North Triumph is only 50% colonised).

The mattresses are considerable more difficult to estimate colonisation as mobile species are inhabiting them opposed to the expected sessile animals. The lack of epilithic flora and fauna may be attributed to the basic pH chemistry of the concrete, sand scouring and/or intermittent burial. More time may be required to colonise the mattresses to the same degree as the steel jackets. Just accounting for sea cucumbers, approximately 15,000 kg (wet wt) or more of these animals may inhabit the Thebaud site.

Overall biomass at Venture is estimated at 23,500 kg (wet wt) where a more diverse reef community is developing. If only sea cucumbers are considered at North Triumph, then the 5,681 m² of surface may be covered by 8,522 kg (wet wt) of biomass. Therefore, since installation in 1998, the mattresses may have provided a total of 47,022 kg (wet wt) of biomass.

Table 5.5 provides a habitat productivity balance showing the amount of habitat covered and biofouling production of the drilling cuttings, jackets and mattresses. The loss of habitat from the drill cutting piles is significantly offset by the observed and potential growth of marine flora and fauna upon the concrete mattresses and steel jackets.

Table 5.5 Alterations and Gains of the Production of Habitat at Each Platform

Habitat Effect		Venture	Thebaud	North Triumph	Totals
Habitat Covered	area of drill piles	5,026 m ²	15,394 m ²	0	20,419 m ²
	benthic production	1,407 kg	4,310 kg	0	5,717 kg
	area of mattresses	1,320 m ²	2,385 m ²	482 m ²	4,187 m ²
	benthic production	370 kg	668 kg	135 kg	1,173 kg
Habitat Created	area of mattresses	10,875 m ²	39,315 m ²	5,681 m ²	55,871 m ²
	benthic production	23,500 kg	15,000 kg	8,522 kg	47,022 kg
	area of jacket	3,200 m ²	4,900 m ²	6,800 m ²	14,900 m ²
	production	6,906 kg	10,574 kg	11,006 kg	28,486 kg
Net Gain in Production		28,629 kg	20,596 kg	19,393 kg	68,618 kg

The amount of productive habitat loss by the drill cuttings and mattresses at each of the three platforms is offset by the gain in production associated with habitat created by the mattresses surface area, jacket legs and cross members. The colonisation of hard substrates provided by the mattresses and jacket structures was observed to generate approximately 10 times the original standing stock biomass produced in the benthos.

6.0 TAIN AND BODY BURDEN

In 2001 and 2002, a different approach to mussel collection was taken. Prior to 2001, moorings were set at 250 m, 500 m, 1000 m, 2000 m 4000 m, 10 km and 15 km from the platforms. Because of renewed drilling activity at Venture in 2001, the mussel moorings were required to be removed to avoid destruction by the drill rig and supply vessels. As an alternative, mussels were scraped from a jacket leg at the surface (0-1 m) which provided a sample as close as possible to the produced water caisson (Photo 10 & 11). In 2001, mussels were removed from one jacket leg at Venture. In 2001, mussels were removed from the production platform jacket leg furthest from the caisson in the direction of prevailing current and from the well head leg in the same direction of current at Thebaud. This platform provides two distances to compare body burden and tainting. No control mooring was set. In 2002, mussels were collected from Venture and Thebaud platforms.

Another new addition to this EEM component was the collection and analysis of Jonah crab at Venture and North Triumph. Appropriate sentinel finfish species are not readily available and these crabs appear to be consistently in the area. In 2002, crabs were obtained using the manipulator of the ROV. Only two crabs from each site were taken as a preliminary cursory evaluation for further study. Appendix F contains the 2002 laboratory analyses from DalTech's Canadian Institute of Fisheries Technology.

6.1.1 Venture

Table 6.1 shows the results of sensory evaluations and body burden of hydrocarbons in mussels moored in the vicinity of the Venture platform.

November 1999 – February 2000

Results from the sensory evaluation showed a significant difference at the 5% level for mussels at the top cage at Venture 1000 m. Taste panelists were contradictory with respect to mussels taste. Different panelists referred to either the control or the sample as having a non-petroleum sweet flavour. Hydrocarbon analyses showed a peak for C₁₇ and pristane as being much larger at Venture 1000 m compared to the standard and other mussel samples. Examination of lipid composition shows that 10% of the lipid is free fatty acids; a result that is double that of the control. This result suggests considerable metabolic activity in these mussels. This observation is also evident at the 10 km samples from Venture which exhibit the next highest levels of lipid, triacylglycerol and free fatty acids. The mussels at Venture 1000 m were well nourished and apparently healthy.

Table 6.1 Aliphatic Hydrocarbon Concentration in Blue Mussel Tissues at Venture Mooring Stations (ppm, dry weight)												
Distance	Aug 98–Oct 98		Oct 98 – Apr 99		Nov 99 – Feb 00		Feb 00 – May 00		Aug 00 – Nov 00		July 2002	
	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM
250 m									21.26	3.74		
500 m t	20.5	0.4	37.7	15.2	18.63	14.77	28.44	3.6	28.64	4.43		
500 m b	20.5	0.5					25.68	2.69				
1000 m t			26.25	3.55	13.7	1.43	33.50	2.51				
1000 m b							22.45	0.60				
2000 m t			27.45	3.1			19.67	1.42				
2000 m b							31.43	3.52				
4000 m t	12.5	2	27.35	9.9	9.51	2.61	20.84	4.00				
4000 m b	8.5	1.5	17.25	2.1								
10 km t			27.4	6.7	9.94	0.68	20.98	2.09				
10 km b							24.36	1.96				
15 km t			11.1	1.7	17.56	1.92	22.75	1.8				
15 km b			8.55	1.55	11.52	0.82	19.65	1.65				
Control t	11.5	2.5	11.2	1.2	12.59	3.62	17.53	1.84	23.83	6.42		
Control b	9.5	2	11.2	2.6	13.94	1.40	14.62	1.41				
Source			11.2	0.6								
Legs											**	

***Bold** indicates where significant difference in taste and/or odour were detected

** indicates interfering substances present

OBM= Oil Based Mud

t= top nets, b= bottom nets

The concentration of aliphatic hydrocarbon is relatively similar throughout the Venture samples and the North Triumph control samples. Total hydrocarbon values at Venture 4000 m and 10 km are lower in comparison. The oil-base mud region is similar for Venture mussels except at 500 m (Table 6.1). Examination of the chromatographic charts of these samples (Appendix F) shows that the C₁₇/pristane pair (indicative of healthy intake of algae) is less important and the higher concentration of hydrocarbons are non-biogenic.

February 2000 – May 2000

Triangle testing identified significant differences in the sensory characteristics of the Control samples and at the top cage of Venture 2 km. The Control samples were described as “bitter, off and quite obviously different”. The Venture 2 km mussels were significantly different in odour, not taste. The tissue lipid content of the Control mussels was higher than that of the Venture and Thebaud levels. It is unknown if this factor caused the discernable flavour difference. Aliphatic hydrocarbon analyses showed the fraction of oil-based mud is lower than tainting concentrations.

June 2000 – November 2000

Modification to the mooring locations was made considering that drill cuttings and associated mud are no longer discharged from the drill rigs and the dispersion of drill cuttings was apparently not affecting the bottom set of mussels. The number of mussel mooring stations have been changed to include stations at 250 and 500 m from the Venture platform with cages set at mid-depth in an effort to place the mussels in the zone of influence of produced water.

Triangle testing of the mussel samples showed no significant difference between the two Venture locations and the Controls.

November 2000 – April 2001

Analytical results of test mussels from the 250 m and 500 m Venture moorings provided no definitive indication of tainting originating from petrogenic hydrocarbon sources. Triangle testing identified a significant difference at the 5% level in flavour of mussels between the control and the 500 m site. This difference may be coincidental as the comments ranged considerable. Biochemical markers show that the mussels were in good health.

July 2001

Mussels collected from the Venture jacket leg contained a high level of interfering material resembling a hydrocarbon distillation cut (a light lubricating oil). When diluted this material appeared to be similar to a hydrocarbon profile previously observed at mussel mooring stations at 250 and 500 m. The

hydrocarbon profile of produced water condensate samples were compared and found not similar in the signature. The lipid content of the Venture mussels indicate they are in a healthy nutritional state.

July 2002

As in 2001, mussels collected from the Venture jacket leg contained a high level of interfering material resembling a hydrocarbon distillation cut (a light lubricating oil). The lipid content of the Venture mussels seem to represent poor phytoplankton availability. Cold and cloudy weather in offshore Nova Scotia in 2002 may have prevented major algal blooms from occurring.

The crab leg tissue samples show more of the NovaPlus Drill Mud profile than of the hydrocarbon profile of n-alkanes expected from the mussels. The crab hepatopancreas profile showed the interfering hydrocarbon material already reported for the Venture mussels (Table 6.2). Very close scrutiny also showed traces of the Nova Drill Plus Mud peaks intermixed with the C₁₂-C₂₀ alkane profile normally reported for mussels. The large pristane peak in the hydrocarbons from the Venture crab hepatopancreas suggests a localised diet rich in bottom invertebrates, or dead copepods or copepod feces, as it was not evident in the Thebaud crab hepatopancreas.

Table 6.2 Aliphatic Hydrocarbon Concentration in Jonah Crab at Venture (ppm, dry weight)

Tissue	C ₁₀ -C ₂₄	OBM	Pristane
Leg flesh	35.55	35.37	3.84
Hepatopancreas	146.18	64.45	38.14

6.1.2 Thebaud

Table 6.3 shows the sensory evaluation and body burden concentration of hydrocarbons in moored mussels in the Thebaud field.

Table 6.3 Aliphatic Hydrocarbon Concentration in Blue Mussel Tissues at Thebaud Mooring Stations (ppm, dry weight)

Distance	Nov 99 – Feb 00		Feb 00 – May 00		Aug 00 – Nov 00		July 01		July 2002	
	C ₁₀ -C ₂₄	OBM	C ₁₀ -C ₂₄	OBM	C ₁₀ -C ₂₄	OBM	C ₁₀ -C ₂₄	OBM	C ₁₀ -C ₂₄	OBM
platform							31.65	5.71	44.54**	11.97**
wellhead							20.09	4.7		
250 m					32.39	7.99				
500 m t					32.39	7.99				
500 m b										
1000 m t			27.99	2.17						
1000 m b			34.22	3.17						

Table 6.3 Aliphatic Hydrocarbon Concentration in Blue Mussel Tissues at Thebaud Mooring Stations (ppm, dry weight)

Distance	Nov 99 – Feb 00		Feb 00 – May 00		Aug 00 – Nov 00		July 01		July 2002	
	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM	C ₁₀ –C ₂₄	OBM
2000 m t	17.62	1.13	24.15	1.78						
2000 m b			14.87	0.61						
4000 m t	6.63	1.41	16.78	1.16						
4000 m b			33.24	1.76						
10 km t										
10 km b										
15 km t										
15 km b										
Control t	12.59	3.62	17.53	1.84	12.57	1.70				
Control b	13.94	1.40	14.62	1.41						
Sobeys							11.40	0.95		

*Bold indicates where significant difference in taste and/or odour were detected

t=top cage; b=bottom cage

** denotes average

November 1999 – February 2000

The integrity of the mussel moorings close to the Thebaud platform were low. The sensory evaluation did not find any significant difference between the 2000 m site and the Control. Aliphatic hydrocarbon concentration is lower than the Control or other stations but similar in the oil-base mud region.

February 2000 – May 2000

Analyses of the Thebaud mussel monitoring sites provide no definitive indication of tainting originating from petrogenic hydrocarbon sources. Triangle testing identified significant differences in the sensory characteristics of the Control samples and mussels from 1000 m (odour), 2000 m (odour and flavour) and 4 km (odour and flavour) distances from the platform. As with the Venture Control samples discussed above, the Control samples were considered objectionable which formed the basis of their forced choice decision.

June 2000 – November 2000

Triangle testing of the mussel samples showed no significant difference between the samples and Control. Pristane and C₁₇ levels were low in comparison to previous sample lots and the C₂₁ peak representing algal hydrocarbon heneicosahexaene was not present as in previous samples. The mussels were considered in poor condition judging by their high water content. The mussels had not received enough food to replenish body reserves following spawning.

July 2001

In the absence of an offshore control mooring, mussels from a local commercial supplier (Sobeys) were used for the sensory and body burden analysis. Those mussels were considerably different in size, lipid content and water.

Aliphatic hydrocarbons in mussels from the Thebaud production platform were twice the concentration (25.87 ppm) detected in commercially bought mussels (11.40 ppm). Hydrocarbons within the OBM range were higher in the platform mussels compared with the Sobeys control. The triangle tests indicated that taste decisions were biased by appearance because no adverse comments were made on aroma and flavour on Control or Venture and Thebaud mussels.

Petrogenic hydrocarbons were not detected in either crab leg tissues or crab hepatopancreas samples. No significant differences in sensory evaluation were observed in reference or North Triumph crab leg meat samples.

July 2002

As in 2001, mussels collected from the Thebaud jacket leg contained minor level of interfering material resembling a hydrocarbon distillation cut (a light lubricating oil). The lipid content of the Thebaud mussels seem to represent poor phytoplankton availability.

The crab leg tissue samples show more of the NovaPlus drill mud profile than of the hydrocarbon profile of n-alkanes expected from the mussels. The crab hepatopancreas profile also included the normal alkanes, but the C₁₅-C₁₈ region showed more of the peaks from the NovaPlus drill mud (Table 6.4).

Table 6.4 Aliphatic Hydrocarbon Concentration in Jonah Crab at Thebaud (ppm, dry weight)

Tissue	C ₁₀ -C ₂₄	OBM	Pristane
Leg tissue	36.58	36.20	0.81
Hepatopancreas	15.38	1.45	0.54

7.0 MARINE MAMMALS AND SEABIRD MONITORING

7.1 Marine Mammals – Thebaud Observations

The Thebaud Production Platform is the only manned facility in the Tier I phase. Since development drilling ceased and the rigs are brought in occasionally, offshore observers are stationed only at Thebaud. A total of 245 marine mammal observation surveys were performed at the Thebaud production platform from January 1, 2002 to December 31, 2002. These observations identified five whale and one seal species. A number of observations were not identified to species level due to poor visibility. Of these 245 surveys, visibility of less than one kilometre (due to weather) was observed in 26 of those surveys. The highest number of surveys per months were completed in July and September. No marine mammals were observed in 82% of all marine mammal surveys at this location. In comparison, no marine mammals were observed in 79% of the surveys in 2001. A total of 31 minke whales (MKW), 6 fin whale (FNW), 8 Atlantic white-sided dolphins (AWD), 11 harbour porpoise (HBP), 1 sperm whale (SPW), 48 unidentified dolphins (CET), 15 unknown whales (UNK), 24 grey seals (GYS) and 5 unidentified seals (SEA) were observed over the course of these surveys (Figure 7.1).

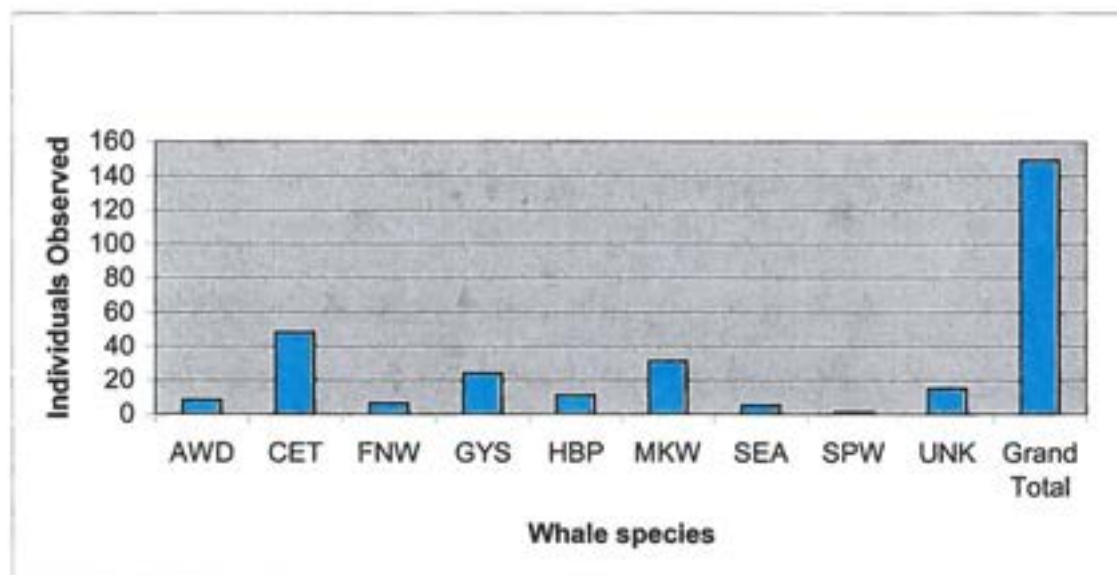


Figure 7.1 Whale Species Observed in 2002 at Thebaud

Due to the close proximity of Sable Island, herds of seals were often noted along the Island's west bar. Minke whales were observed in association with seals 31% of the time in comparison to 25% of the time in 2001. Most of the whale observations occurred in the summer months (Figure 7.2).

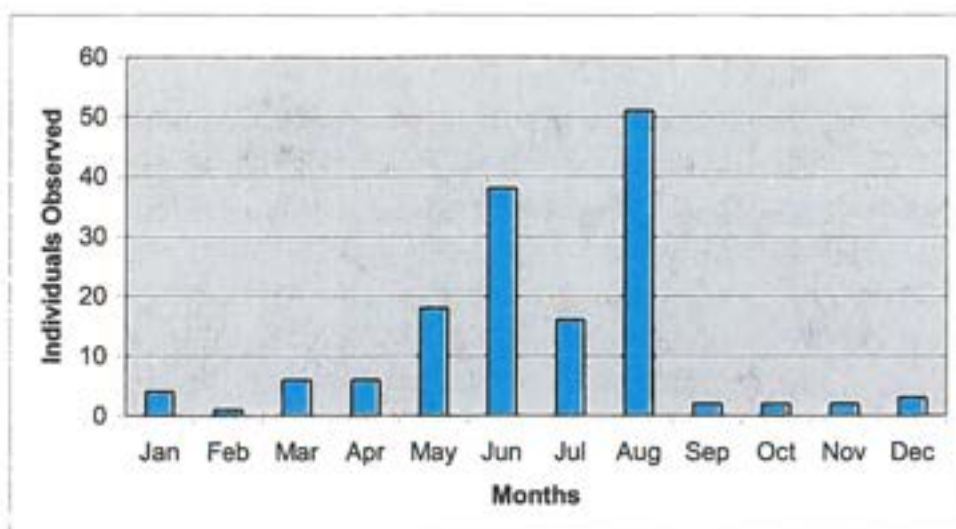


Figure 7.2 Monthly Observations of Whale at Thebaud in 2002

The whales, dolphins and seals observed from the platforms are representative of those species which are expected to transit this area, and their presence demonstrates either indifference or attraction. Fin whales appear to prefer areas with high topographic variations from 100 m to 200 m (Breeze *et al.* 2002). They migrate between their northern feeding grounds to their southern wintering areas. They are listed as a species of special concern by COSEWIC (COSEWIC 2002). Sperm whales are more common in canyon areas as they prefer water depths between 200 m to 1,500 m (Breeze *et al.* 2002). They are listed as a species not at Risk by COSEWIC. The majority of sightings of sperm whales in Nova Scotia are males since females sperm whales are predominantly found in sub tropical and tropical waters (Breeze *et al.* 2002). The majority of sightings of marine mammal by observers on platforms were grey seals, clearly the dominant marine mammal species in that vicinity as Sable Island is a major breeding and moulting area. Grey seals whelp on Sable island between mid-December and mid-January (Breeze *et al.* 2002). Grey seals are listed as species not at risk by COSEWIC (COSEWIC 2002). Atlantic white sided dolphins prefer water depths deeper than 50 m and are not listed by COSEWIC (Breeze *et al.* 2002). Harbour Porpoise move offshore from coastal areas in winter (Breeze *et al.* 2002). Minke whales may occur offshore during their southward migration (Breeze *et al.* 2002). The status of minke whales is not evaluated by COSEWIC.

Since cetaceans were observed from the platforms, it is clear that they were well within the acoustic envelope of onboard platform and support vessel noise generating activities. The species reported are those most frequently seen by observers onboard transport and from recreational vessels. The observed behaviour of the species has been to approach stationary and moving vessels, and often follow and appear to demonstrate some curiosity. This is typical behaviour of the minke whale for example, well known for its surprise appearances alongside and aft of vessels.

This behaviour may reflect non-avoidance of SOEP structures that seem to pose no threat, over a period which now encompasses several generations of marine mammals. Lack of avoidance is a lower level of response than deliberately approaching structures.

7.2 Offshore Seabird Monitoring

7.2.1 Survey Results

Platform-based Surveys – Thebaud Platform

Seabird monitoring observations continued on the Thebaud production platform throughout 2002. In 2002, 193 surveys were conducted over 150 days at Thebaud, an average of 1.29 per day (ranging from 1 to 3 per day), a slight decrease from 1.68 per day in 2001. Surveys were conducted over an equal number of days in 2002 in comparison to 2001.

More than 14,940 birds were recorded at Thebaud in 2002 during daylight surveys. The five most numerous species encountered were Black-legged Kittiwake, Herring Gull, Greater Shearwater, Northern Gannet, and Great Black-backed Gull (Figure 7.3). No birds were recorded in 28% of the surveys; these results were slightly up from the 2001 results (21%). Figure 7.4 shows the number of seabirds per survey from 1998 to 2002. The number of birds observed per unit effort in 2002 was up from that of 2001 at Thebaud (14.7 birds/day+night survey in 2001 vs. 59.3 birds/day+night surveys in 2002). This is in part due to high numbers of Black-legged Kittiwake observed in January and February of 2002. A total of 16 marine bird species and one coastal species (Double-Crested Cormorant) were identified.

All of the common species were observed both far from, and in close proximity to, the platform, and did not generally appear to be avoiding the platform area. More gulls were counted beyond 300 m of the platform than within 300 m, which is in contrast with the previous year's trend but similar to the observations from 2000. More Greater Shearwaters, Black-Legged Kittiwake and Northern Gannets were recorded beyond 300 m than within 300 m.

There was an decrease in the number of night-time surveys conducted under the platform lights in 2002. Twenty-eight surveys were conducted throughout the year. There was an increase in the average number of birds per survey from 19 birds per survey in 2001 to 58 birds per survey in 2002. Herring and Great Black-backed Gulls were the only bird species observed at night during the 2002 surveys. Birds were seen in all surveys conducted under the platform lights in 2002.

Figure 7.3 Seabird Species Composition for Thebaud Platform

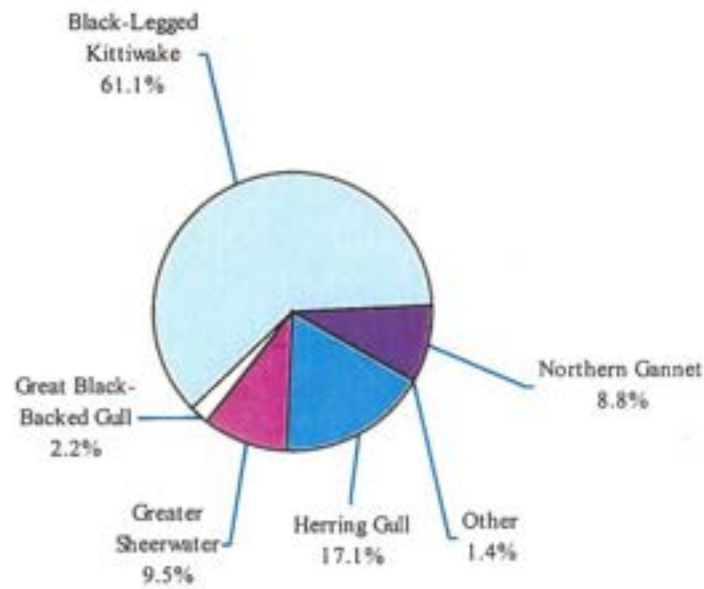
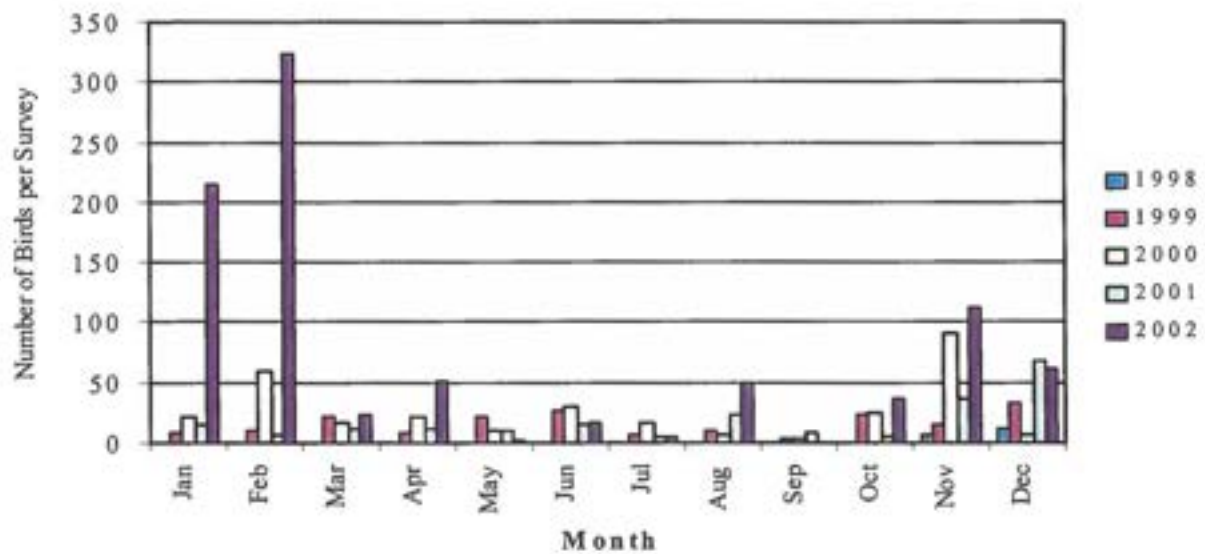


Figure 7.4 Number of birds per survey at Thebaud Platform



Platform Dead/Exhausted Bird Surveys - Thebaud Platform

In 2002, 420 walkabouts on Thebaud to survey dead/exhausted birds were performed over 286 days (1.46 surveys per day), which is similar to the ratio of 2001. A total of 16 birds in 11 different surveys were recorded with 10 birds found dead, of which seven were land-based birds (warblers), and one of unknown species. Of the known causes of death, one bird died from the flare while another may have hit the deck crane.

More than 62% of bird mortality was recorded in September and October which corresponds with fall migration of land-based birds and is similar to previous years results. Other species found on the platforms in various conditions, included Greater Shearwater, Pigeon and Sandpiper.

The relatively low incidence of dead birds (2.3% of the surveys) and the relatively high frequency of the surveys suggest there were likely few large scale fatalities in the vicinity of Thebaud, despite evidence that birds were, on occasion, fatally attracted to the upset flaring.

7.2.2 Population Trends

Procellariidae

In decreasing abundance, Greater Shearwater, Northern Fulmar and Sooty Shearwater occur regularly in the vicinity of Sable Island (Brown 1986). Shearwater abundance is lowest during the winter months after they have migrated to the southern hemisphere. Greater Shearwaters are most abundant during the period from July to September while Sooty Shearwaters are most abundant between April and June (Brown 1986). Northern Fulmars are present in the vicinity of Sable Island throughout the year, but are most abundant between October and December, and are least abundant between January and April.

At Thebaud, shearwaters were also most common in June in 1999, 2000, 2001 and 2002, presumably returning from breeding in the southern hemisphere (Figure 7.5). Their distribution loosely mirrors the trend for the Sable Island area (Brown 1986). In 1999, 71 Sooty Shearwaters were recorded over the spring/summer, while only seven, eight and one individuals were recorded in 2000, 2001 and 2002 respectively. Northern Fulmars encounters were infrequent; four were recorded in January 1999, and up to seven birds were recorded over 12 surveys in seven days in October, 1999. Only one Northern Fulmar was recorded in 2000 (July 7) while seven individuals were recorded in April and May at Thebaud in 2001. No Northern Fulmars were observed during the 2002 surveys

The area around Sable Island supports high densities of Greater Shearwaters in comparison to other areas in Atlantic Canadian waters. Densities of Sooty Shearwater and Northern Fulmar in the Sable Island area are moderate in comparison to densities in other areas of Atlantic Canada.

Greater Shearwaters have generally been one of the most abundant and frequent species recorded during the platform-based surveys as they are regular summer resident offshore (Breeze *et al.* 2002). Other shearwaters (*i.e.*, Sooty) have been relatively rare, as have Northern Fulmars. Northern Fulmars are more common in winter which unfortunately coincides with poor visibility from the platform. Therefore, there is no obvious change in the distribution of procellariids in the vicinity of Sable Island.

Storm-petrels

Two species of Storm-petrel, Leach's Storm-petrel and Wilson's Storm-petrel are regularly reported in Atlantic Canadian waters (Brown 1986, Breeze *et al.* 2002). Relatively high numbers of Leach's and Wilson's Storm-petrels are found the waters around Sable Island as compared to other areas of Atlantic Canada. Large numbers of Leach's Storm-petrels arrive in Canadian waters in May. They remain plentiful off Sable Island until early autumn when they migrate south following the end of the breeding season. Wilson's Storm-petrels spend the austral winter in the northern hemisphere. Migrating birds begin to appear in large numbers in the vicinity of Sable Island in May and remain abundant until August when they begin to migrate south. Wilson's Storm-petrel is the most abundant of the two species. Both species have been found resting on the platforms during the daily walkabouts, however, their numbers have been small. Due to their small size, they are likely being missed during platform-based surveys. Only three petrels were observed in 2002 (June and September).

Northern Gannets

Northern Gannets are most abundant in the vicinity of Sable Island during the months of June and July. The birds present in the vicinity of Sable Island at this time may be subadults or failed breeders. Northern Gannet numbers are typically very low during the winter months when they migrate to the southeastern coast of the United States and the Gulf of Mexico (Breeze *et al.* 2002). The concentrations of Northern Gannets found around Sable Island are similar to those found in most areas of Atlantic Canada except for the vicinity of breeding colonies where concentrations are very high.

At Thebaud, Northern Gannet numbers peaked in March, 1999, likely migrating to breeding colonies in the Gulf of St. Lawrence (Figure 7.6). In 2000, the spring peak was highest in April, while the highest peak for the year was in November, which is more typical of the area. In 2001, over 50% of the Northern Gannets observations were recorded in the months of March, April, and May. In 2002, high numbers of Northern Gannets were observed in the months of April, October, November and December. Gannets recorded from the platforms were migrating through the area, however there was no evidence of avoidance of the platforms.

Figure 7.5 Shearwater Occurrence at Thebaud

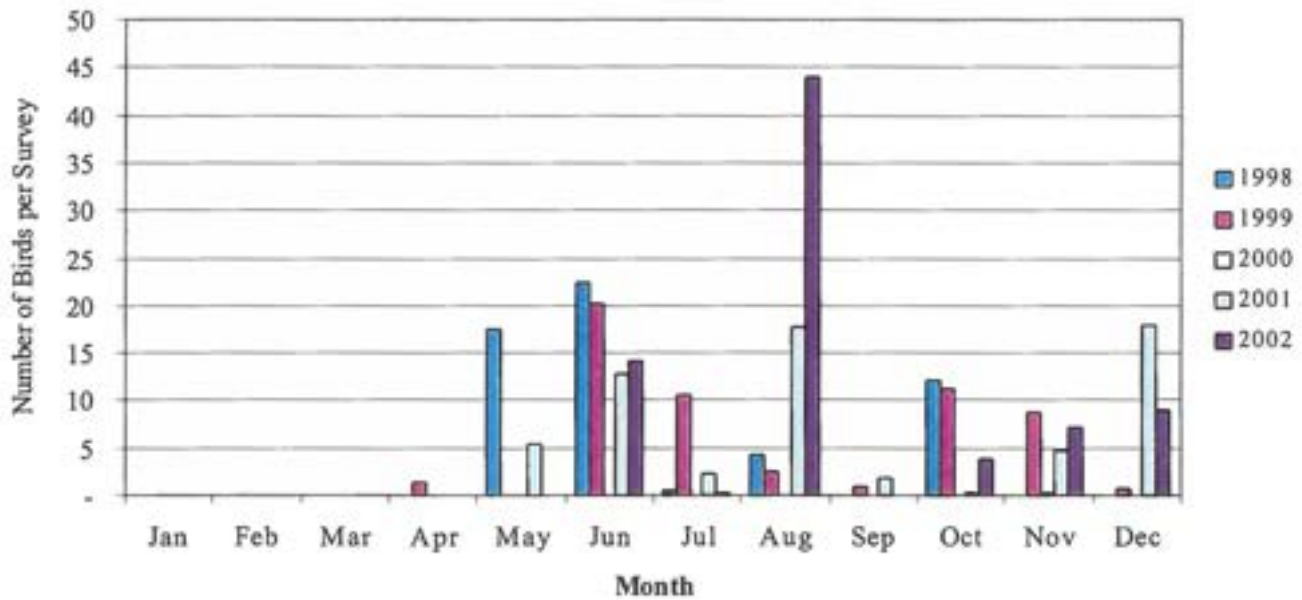
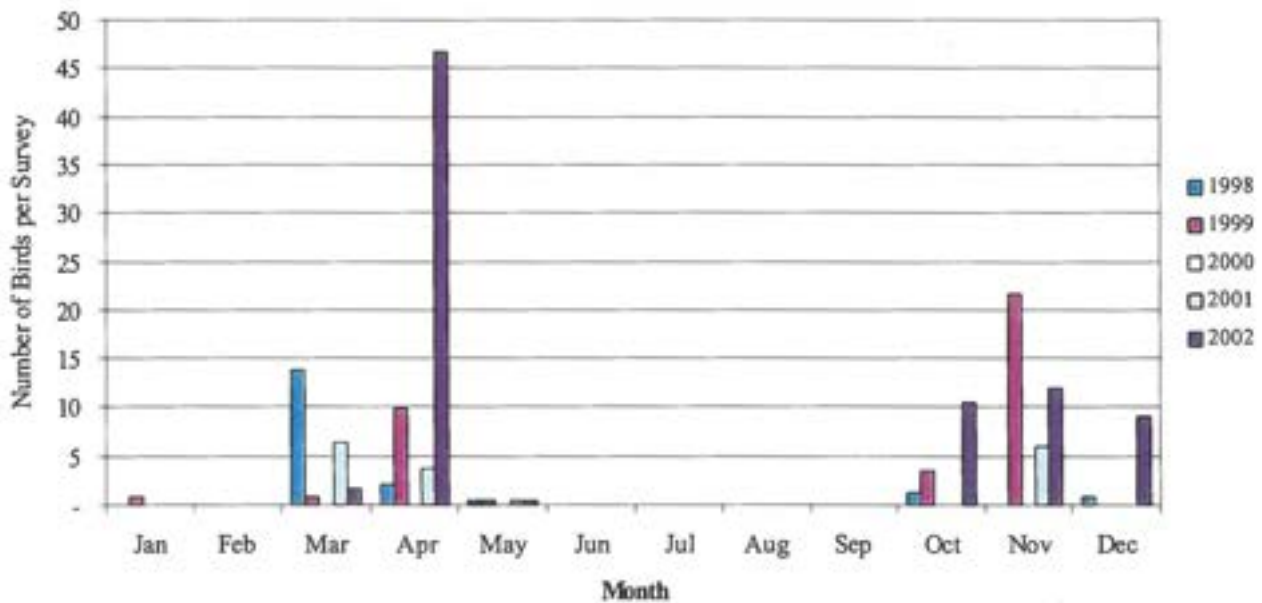


Figure 7.6 Northern Gannet Occurrence at Thebaud



Larids

At least 13 species of *laridae* (gulls, terns, jaegers and skuas) have been recorded in the PIROP data for the region (Brown 1986). Herring Gull, Great Black-backed Gull and Black-legged Kittiwake account for most of the larid species observed within the region, and this same trend was found at the Thebaud platform in 1998, 1999, 2001 and 2002 (Figures 7.7 to 7.9). All of these species display the same seasonal abundance patterns. The lowest numbers of larids are present during the period from April to June. At this time gulls and kittiwakes are gathered at their coastal breeding colonies and tend to forage in close proximity to the colonies. Both Herring Gull and Great Black-backed Gull breed on Sable Island. Larid numbers increase through the summer and peak during the period between October and December. At this time, adult and juvenile larids have dispersed from their breeding colonies and are foraging at sea. Larid numbers decrease between January and March, probably as a result of a combination of mortality and movement of birds to their colony sites.

The waters around Sable Island support relatively high concentrations of Herring Gulls and Great Black-backed Gulls in comparison to other areas of Atlantic Canada. This may reflect the presence of large colonies of both species on Sable Island. Population densities of Black-legged Kittiwakes are generally lower in the waters around Sable Island than in other areas of Atlantic Canada.

Herring and Black-backed Gulls have generally been two of the most abundant and frequent species recorded during the platform-based surveys, and of the other larids, Black-legged Kittiwake were the most abundant. The data at Thebaud generally supports the trend of peak abundance of all three species in the fall (Figures 7.7 to 7.9). An exception is the high number of Black-legged Kittiwakes recorded in February of 2000 and in January and February of 2002; this was due to flocks estimated at larger than 500 birds.

A single Long-tailed Jaeger was recorded at Venture in February, 1999, and Great Skuas were recorded at Venture in October/November over four surveys. No jaegers and a single Great Skua (April 18) were recorded at Venture in 2000. At Thebaud, up to three Great Skuas were recorded over five days in July, August and September, and an estimated 350 were recorded resting within 300 metres of the Thebaud production platform in December, however the latter observation is suspect and has not been confirmed. In 2000, 2001 and 2002, no jaegers or skuas were recorded; however, given that the rarity of these species is not unexpected, and surveys were conducted over fewer days in 2001 than 1999, their apparent absence cannot be attributed to the platforms.

Terns are associated with Sable Island. At Thebaud, Common Terns were only recorded in July and August 2001 as well as in June of 2002 (Figure 7.10). The recording of few terns at Thebaud in 2001 and 2002 is not surprising since only one was recorded in 2000 (July).

Figure 7.7 Herring Gull Occurrence at Thebaud

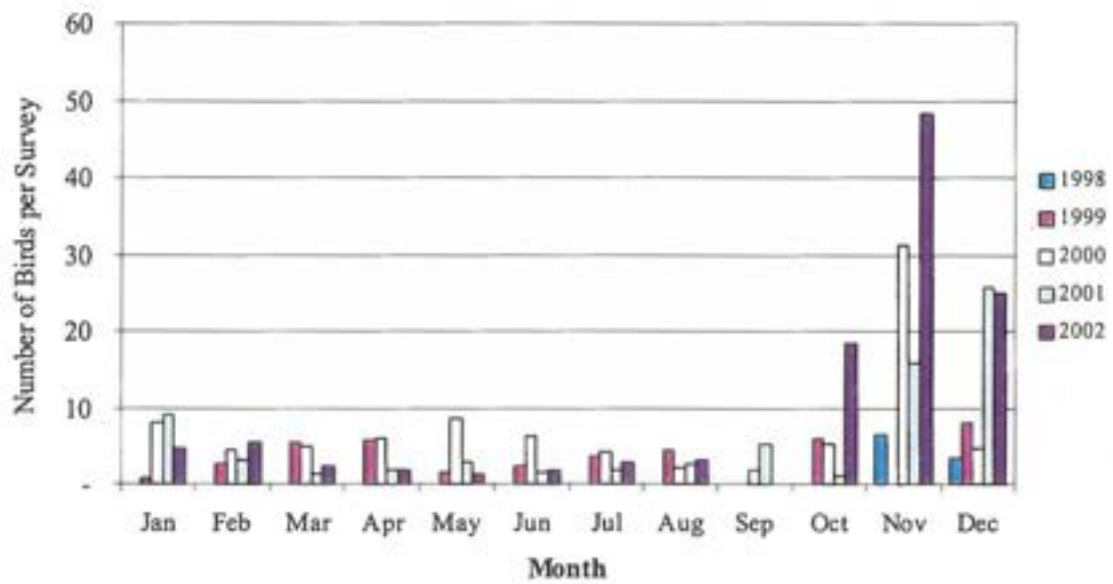


Figure 7.8 Great Black-Backed Gull Occurrence at Thebaud

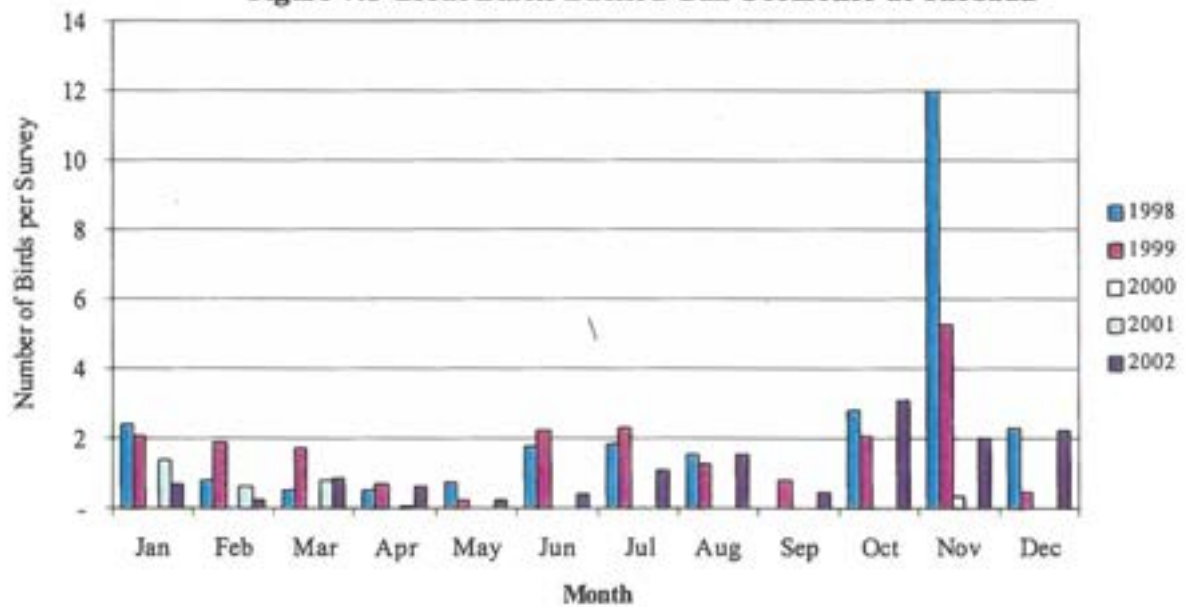


Figure 7.9 Black-legged Kittiwake Occurrence at Thebaud

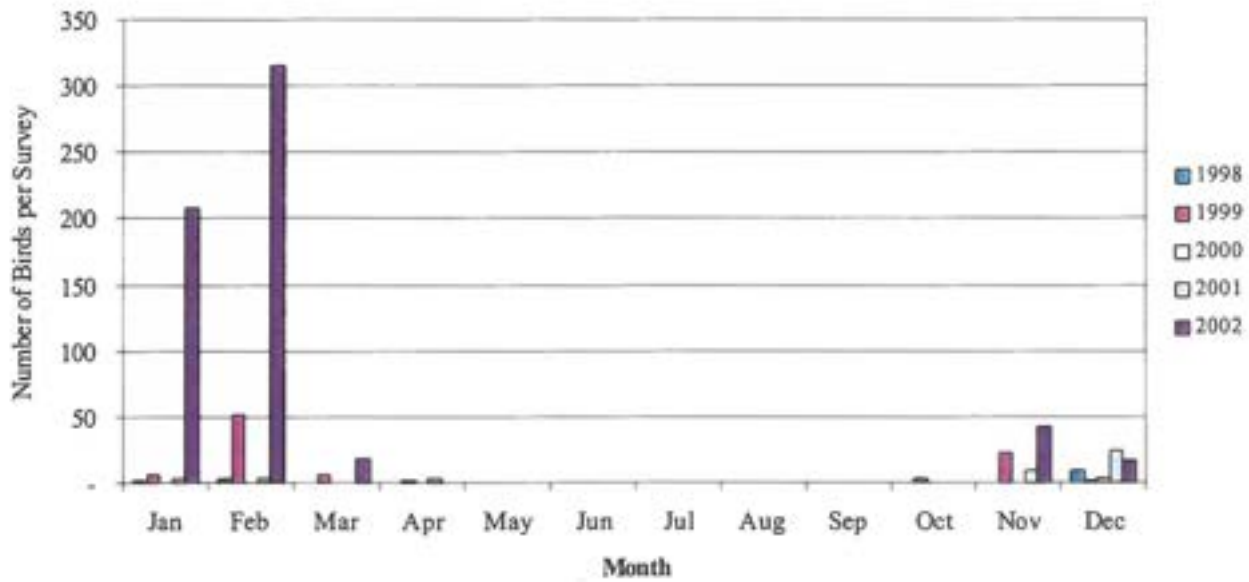
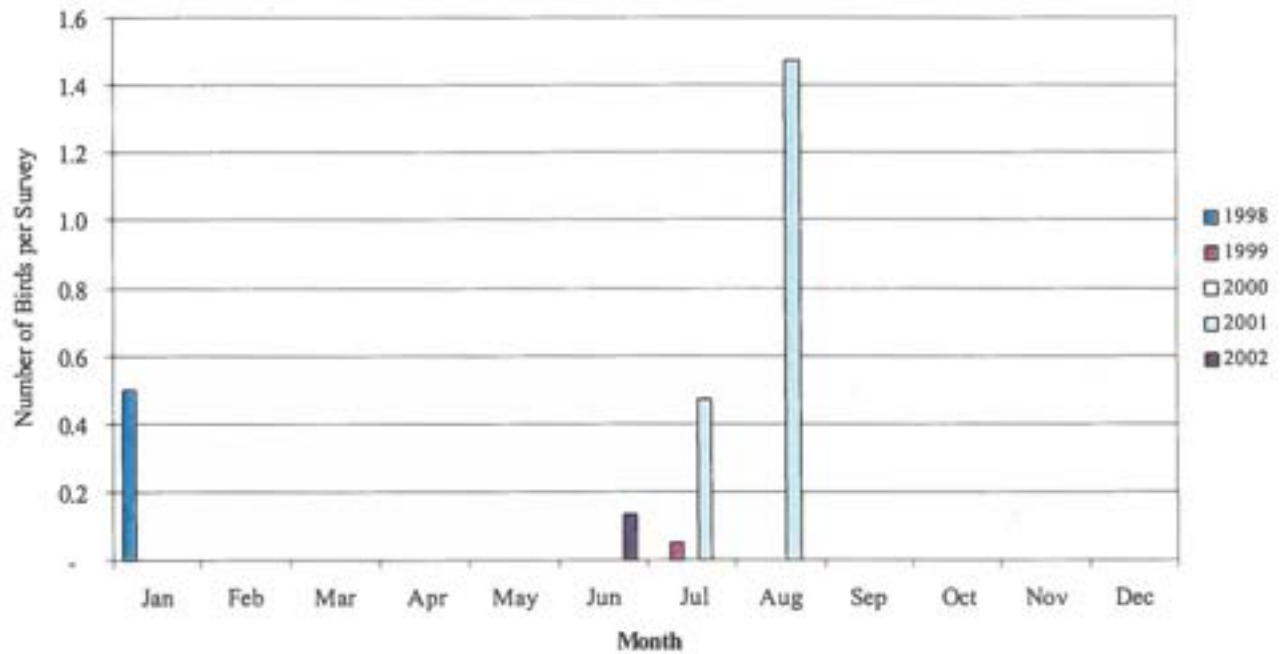


Figure 7.10 Common Tern Occurrence at Thebaud



Alcids

Five alcid species can be expected to occur in the region including Dovekie, Common Murre, Thick-billed Murre, Razorbill, and Atlantic Puffin. All of these species are pelagic species that typically stay away from land except during breeding. In general, these species are most abundant in the waters around Sable Island during the winter months, particularly during the months of January and February (Brown 1986). Numbers decline during the spring as these birds congregate at their breeding colonies. Alcids disperse from these colony sites in the autumn and reach the Sable Island area in early winter. This pattern is similar for all of these species although there are some differences in the time they are present in the Sable Island area (Brown, 1986). The area around Sable Island generally supports a relatively low population density of all of the alcid species in comparison to other areas of Atlantic Canada. The highest densities are typically found in the waters around Newfoundland

Alcid sightings by observers have been quite rare, however, this is not surprising given their coloration and size. In 2002, dovekies were sighted both within and beyond 300 m from the platform. Murres were recorded on 25 occasions in 1999, 6 occasions in 2000 and six occasions in 2002 at Thebaud but were not recorded in 2001. Murres are common offshore in winter (Breeze *et al.* 2002).

7.2.3 Summary of Seabird Observations

Bird migration trends by the Thebaud platform generally mirror Sable Island patterns. All common species were observed both far and in close proximity to the platform and did not generally appear to avoid the platform area. Low incidence of dead birds and the high frequency of the surveys suggest there was likely no large scale fatalities in the vicinity of the platforms. Few fatalities were observed to occur as a direct result of flaring. As flaring was recorded in few surveys at Thebaud, flaring is likely a rare event during drilling of the wells, and during production.

7.3 Sable Island Oiled-Seabird Beach Surveys

During 2002, Zoe Lucas, on behalf of ExxonMobil carried out eleven beached seabird surveys on the north and south sides of Sable Island, one in each month except October. The interval between surveys averaged 31 days, the longest being 48 days (between the November and December surveys). Table 7.1 shows the number, and percent oiled for the main groups of seabirds found as beached carcasses during year 2002: 208 *procellariidae* or tubenoses (Northern Fulmar and shearwaters); 101 larids (gulls and terns); and 539 auks (Razorbill, Common and Thick-billed Murres, Black Guillemot, Dovekie, and Atlantic Puffin).

Table 7.1 Monthly Observed Beached Seabird Carcasses on Sable Island – 2002 Survey

Month	Tubenoses		Gulls & Terns		Auks	
	Total No.	% Oiled	Total No.	% Oiled	Total No.	% Oiled
January	3	0	12	0	15	13.3
February	14	0	16	0	36	41.7
March	7	14.3	22	0	259	83.8
April	4	0	19	5.3	139	75.5
May	2	50	8	0	71	66.2
June	47	2.1	6	0	4	50
July	82	1.2	5	0	2	100
August	39	0	3	0	0	-
September	3	33.3	0	-	0	-
November	6	16.7	4	0	0	-
December	1	0	6	0	13	53.8
Totals	208	2.9	101	1.0	539	73.7

With the exception of the sandy plain area (on the south side of the island), the beach was examined from the tideline to the base of vegetated dunes. Along the sandy plain the area of beach surveyed extends from tideline to approximately 50 metres inland. Seabird carcasses were collected, examined for oiling, entanglement, and experimental marking such as leg bands, and removed from the beach. Protocol provided by John Chardine of the Canadian Wildlife Service was used for recording numbers and rates of oiling.

Oiled bird specimens were sent to Seatech Ltd. in Dartmouth, Nova Scotia for oil identification. Of twenty-four specimens collected during 2002, ten contained crude oil (four slightly weathered, six weathered); one contained Bunker C and unknown heavier oils; and one contained lube or hydraulic type oil. Weathered crude oil generally indicates discharges from oil tanker cargo or slop tanks, and contamination containing only Bunker C is possibly from tank washings.

During 2002, the numbers and species composition of beached seabirds, and the proportion oiled, were consistent with patterns observed on Sable Island in previous years. Auks comprised 98% of oiled seabirds found during 2002. Most oiled carcasses washed ashore during late winter and all were contaminated with very dark (black-brown) thick oil, the oil usually having a crusty and hardened outer layer.

8.0 SUMMARY AND CONCLUSIONS

The summary and conclusions for 2002 EEM Program specific components are as follows:

- The concentration of petroleum hydrocarbons and barium in sediment are elevated above background levels within 250 m and 500 m at Thebaud along Axis 3, the direction of prevailing current (southeast). These parameters are present at background levels in the near-field environment at Venture. Petroleum hydrocarbons and barium were elevated at 250 m at North Triumph along Axis 7, the prevailing current (southwest) direction.
- Amphipod mortality was evident in association with elevated petroleum hydrocarbon and barium concentrations in sediment only at Thebaud near-field 250 m on Axis 3.
- The epibenthic communities at Venture and Thebaud beyond the cutting pile are not adversely affected by the discharge of drill wastes. The drill cuttings pile at Venture persist in virtually the same dimensions as originally deposited, and have not dispersed within one year from cessation of drill waste discharge as predicted. The cutting pile at Thebaud appears to have dispersed or buried.
- The platform leg supports and the protective mattresses at Venture, Thebaud and North Triumph support high densities of sea cucumbers and snow crabs. The cutting piles at Venture and Thebaud, and protective mattresses at the three platforms cover approximately 6,890 kg (wet wt) of benthic standing stock over a combined area of 24,606 m². The mattresses provided habitat for approximately 47,022 kg (wet wt) of biomass and the jackets are enveloped in 28,486 kg (wet wt) of biofouling flora and fauna. An estimated net gain of 68,618 kg (wet wt) in attached biota results after four years of structure installation. The fish habitat compensation plan predicted a 2.4 fold increase over what was lost. The monitoring shows a 10 fold increase in productive habitat and the potential for increased growth and biomass will occur as the epilithic communities mature.
- The marine pipeline from Thebaud to Goldboro attracts a diverse benthic community composed primarily of mobile species. The epilithic sessile flora and fauna are developing at a slower rate than expected.
- Elevated concentrations of petrogenic hydrocarbons are detected in mussel tissues from the jacket legs of Venture and Thebaud platform. Chemical analyses of Jonah crab muscle and hepatopancreas tissues captured adjacent to Thebaud and Venture show contamination with NovaPlus drill mud.
- The whales, dolphins and seal species observed from the platforms are those species which typically frequent the area. It is reasonable to assume that the marine mammals observed from Thebaud are within the acoustic range of the sound spectra radiating from the drilling and production activities.

- Low incidence of dead birds and the high frequency of the surveys on Thebaud indicate that there is no large scale bird fatalities in the vicinity of the platforms. None of the oiled seabird carcasses found on Sable Island contained hydrocarbons traceable to the SOEP Tier 1 operations.

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APPENDIX A

**DATA SCREENING FOR SEDIMENT CHEMISTRY
AND
ANALYSIS OF VARIANCE TABLES**

Sediment Chemistry

Hypotheses

The study design was intended to address specific questions, and to allow the testing of specific null hypotheses, regarding the potential effects of drilling on the marine environment.

Operational monitoring of sediment quality is intended to answer specific questions with respect to the effects of drilling on sediment quality. Based upon results obtained between 1998 and 2000, it was concluded that the most effective monitoring to detect effects has been based upon measurement of barium (a component of drilling muds) and total petroleum hydrocarbons (TPH) in sediments from the vicinity of drilling platforms. The questions being addressed through the monitoring program are as follows:

- Have the concentrations of contaminants (barium and TPH) in sediment changed? If so, can these changes be correlated with sediment toxicity or changes in benthic habitat along a gradient from the platforms?

The first question is formulated into a null hypothesis that can be tested statistically (the results of sediment toxicity will be considered in a later section):

H₀: Drilling operations have not significantly changed the concentration of barium or petroleum hydrocarbons.

Rejection of this null hypothesis (at the probability level $p < 0.05$) will lead to the acceptance of the alternative hypothesis that drilling activity has caused significant change in the marine environment. A statistically significant change may or may not have ecologically significant implications. Therefore, acceptance of the alternative hypothesis must be accompanied by an evaluation of the ecological relevance of the magnitude of the change that has been detected.

Statistical Approach

The statistical approach to evaluating the monitoring data has been structured to consider two levels of scale.

- 1) Testing for overall differences between near-field stations (3,000 m or less from the drilling platform) and far-field stations (more than 5,000 m from the drilling platform) at each specific platform. This testing will be used to assess whether there are 'gross' effects attributable to drilling activities, that cause an overall change within 3 km of the platform. This testing is carried out using a nested Analysis of Variance design, incorporating coding for near-field or far-field stations, and the date of the survey (1, 2, 3, 4, 5, 6, 7 or 8). Of greatest interest are effects due to Field (which may identify persistent natural differences between near-field and far-field areas. Effects due to Time can identify changes over time that occur in both the near-field and the far-field. A

significant Field $\times$ Time interaction term would identify a difference between the near-field and the far-field that does not exist at all times.

- 2) Testing for local effects as a function of Time or Distance, within 3,000 m of each specific platform. These tests are carried out using a nested ANOVA (General Linear Model), and consider time (up to eight sequential surveys over a five-year period), distance from the drilling platform (250, 500, 1,000 and 3,000 m), and the Time $\times$ Distance interaction (potentially significant differences that may not exist at all times or distances from the platform). It is the interaction term that is most likely to identify genuine effects of drilling, as the data sets include the baseline surveys that were carried out prior to significant drilling operations.

In contrast to other work on the effects of offshore drilling platforms in the marine environment (Kennicutt *et al.* 1996), the present study design treats all effects (Distance, Axis, and the Distance $\times$ Axis interaction) as fixed effects. As a consequence, the results of the analysis are specific to each platform and time.

In any statistical testing program where a large number of tests are carried out, there is a risk that random factors will occasionally lead to the conclusion that a statistically significant effect exists, where in fact there is no real difference. Using the conventional statistical probability level (p) of $\alpha=0.05$, this will occur in about one test in twenty. In order to aid in interpreting the importance of statistically significant differences where doubt may exist as to whether they are true effects of the project, four principles were identified during the study design phase. These were the principles of:

- proximity (differences are more likely to be real if they are observed in close proximity to the source of the disturbance);
- adjacency (differences are more likely to be real if two or more adjacent locations are affected);
- multiplicity (differences are more likely to be real if two or more parameters are affected simultaneously); and
- duration (differences are more likely to be real if they persist over time).

Although each of these principles is evaluated independently, they can be taken cumulatively to establish a weight of evidence suggesting that observed statistically significant differences either are, or are not, true effects of the project.

Data Screening

Overall, the analysis of sediments collected between 1998 and 2000 has shown non-detectable results for all or virtually all samples submitted for the PAH (polycyclic aromatic hydrocarbon) and BTEX (benzene, toluene, ethyl benzene and xylenes) compounds. Likewise, concentrations of the low molecular weight (C_6 - C_{11}) in the total petroleum hydrocarbon (TPH) compounds have also been uniformly non-detectable. A limited analytical suite was employed during 2001 (organic analyses included benzene, toluene, ethylbenzene, xylenes, as well as the fractionated TPH compounds. Of these, only the heavier (C_{11} - C_{20} and C_{21} - C_{32}) hydrocarbons were detected.

For statistical purposes, hydrocarbons were expressed as TPH (the sum of C₆ to C₃₂ hydrocarbons).

Among the inorganic analytes, concentrations of antimony, arsenic, beryllium, boron, cadmium, cobalt, copper, lithium, molybdenum, mercury, nickel, selenium and tin were typically less than or at the analytical detection limits in virtually all samples submitted between 1988 and 2000. Of the remaining analytes (total inorganic carbon (TIC), total organic carbon (TOC), aluminum, barium, chromium, iron, lead, manganese, strontium, thallium, uranium, vanadium and zinc) barium is considered to be a key element for monitoring purposes because it is a constituent of barite, a clay-like mineral used in drilling muds.

As part of the overall quality assurance and quality control plan for the monitoring program, field duplicate samples were collected at selected sampling stations. In addition, laboratory duplicate samples were also processed. The field duplicate samples incorporate at least three sources of variation (field variation between samples; sub-sampling variation in the laboratory, and analytical uncertainty), whereas the laboratory duplicate samples incorporate sub-sampling variation and analytical uncertainty. Inspection of the quality assurance results indicated that there was little variation attributable to laboratory analysis. Variability in field duplicates was somewhat higher, indicating that there is local scale patchiness in TPH, and to a lesser extent barium concentrations. Overall, however, the lab and field duplicates indicated that the data were of high quality, and reliable.

1.4 Sediment Chemistry at the Gully

The data set for the Gully consists of five sampling stations, that have been sampled on each of the eight consecutive surveys. As a result, it is possible to test for differences over Time (with the five sampling stations as replicates). It would also be possible to test for differences between stations at the Gully. However, as there were no exploration or drilling activities at the Gully, and these samples were collected to provide assurance that activities near Sable Island were not affecting this area, detecting differences between stations at the Gully is of considerably less interest than detecting differences over time.

Using ANOVA, differences between the eight sequential surveys were tested, using Survey time as a treatment, and the five stations as replicates. Survey was coded as 1 (June 1998), 2 (November 1998), 3 (June 1999), 4 (November 1999), 5 (June 2000), 6 (November 2000), 7 (June 2001) and 8 (July 2002). In performing this analysis, we disregard the fact that by repeatedly sampling the same stations, they become technically pseudoreplicated over Survey. This statistical analysis was conducted only for sediment barium and TPH concentrations.

- For barium, no significant differences were detected at Gully stations, over Survey time.
- For TPH, a significant difference was detected at Gully stations over Survey time.

These differences, although statistically significant, do not appear to be related to drilling activities. Interpretation of the TPH results is complicated by the fact that the sensitivity of the analysis improved over time, and detection limits varied from 15 mg/kg to <3 mg/kg. As a result, it was decided to code "less than" values for TPH as one-half the detection limit value.

With improved analytical sensitivity, TPH was generally detected at all sampling stations during the June 1999 survey (Survey 3), and sporadically thereafter. The TPH concentrations measured at sites in the Gully area ranged from 2.65 mg/kg to 5.45 mg/kg. These TPH concentrations are consistent with background TPH concentrations measured at far-field stations around the drilling platforms at that time, and would not have been detectable during the baseline survey. Therefore, the TPH results do not appear to indicate an effect attributable to drilling activity.

1.5 Sediment Chemistry at Venture

1.5.1 Near-Field vs. Far-Field

Differences between barium and TPH concentrations the near-field and the far-field were evaluated for the eight survey dates, using ANOVA (testing for effects due to Field, Survey, and Field×Survey), and data that were log-transformed, as appropriate, to improve the homogeneity of the variance.

For barium, there was no statistically significant evidence of differences between near-field and far-field, nor was there any evidence of change over time. For TPH, there were significant differences between near-field and far-field, with TPH higher in the near field. There was a significant difference between surveys. TPH was higher overall during the November 1998 survey than at other times. As there were no large-scale differences between near-field and far-field that were indicative of an effect of drilling that affected the entire near-field area, it was considered appropriate to examine possible effects within the near-field area (250 to 3,000 m).

1.5.2 Within the Near-Field Area

Potentially significant differences within the near-field were evaluated using a nested ANOVA model (Table 1.1) with four Distances (250, 500, 1,000 and 3,000 m) and eight Times (June 1998, November 1998, June 1999, November 1999, June 2000, November 2000, June 2001, July 2002). Of particular interest in this analysis is the Distance×Time interaction term, which would indicate the presence of a significant difference at one or more Distances, that was not present at all Times. This would be the expected condition for effects due to the drilling platform that could not exist at the time of the baseline survey (June 1998).

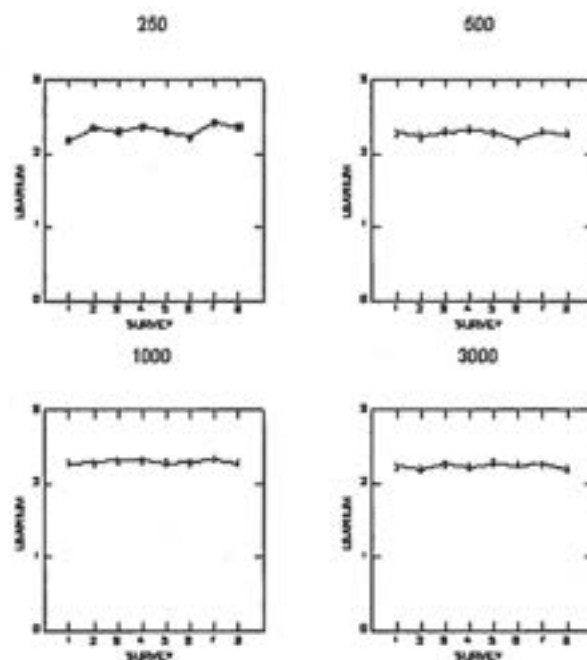
For barium, there were significant differences due to Distance. Barium concentrations were slightly elevated at 350 mg/kg on Axis 5 at 250 m in November 1999. Barium concentrations higher (330 mg/kg) overall in June 2001 (Survey 7) than at Surveys 1, 2, 6 or 8. In addition, barium concentrations were lower overall at the 3,000 m distance from the platform, than at the 250 and 1,000 m distances.

During June 2001, only traces of TPH were detected at two stations 250 m from the platform, and one station 500 m from the platform. In 2002, TPH was detected at 13.3 mg/kg at Station 250-3 and 10.4 mg/kg at Station 250-5. Higher concentrations were found in previous surveys in the southwestern direction (Axis 7).

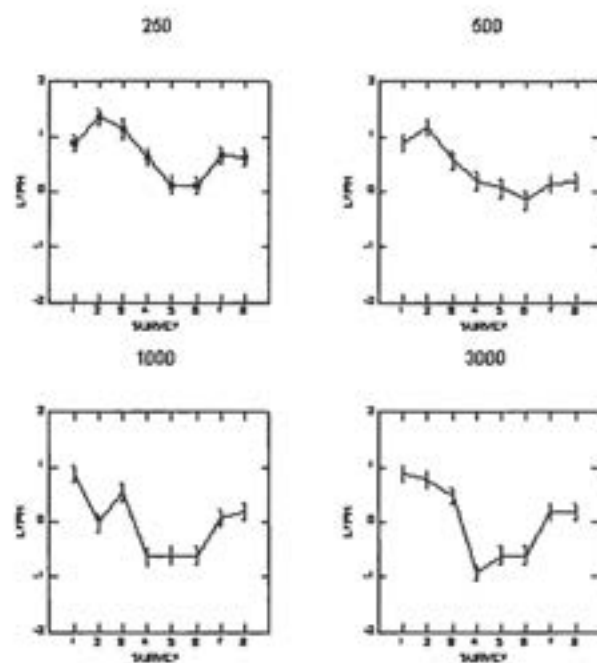
Table 1.1 Tests for Significant Differences Due to Distance, Survey, or the Distance×Survey Interaction at Venture, using ANOVA.

Variable	Probability ¹ (p) of Difference Being Significant (*) or Highly Significant (**)			
	Distance	Survey	Distance×Survey	Comment
Barium	p=0.004*	p=0.066	p=0.470	Distance 3000 m < 250 m, 1,000 m; Time 7 > 1, 2, 6.
TPH	p<0.0001**	p<0.0001**	p<0.0001**	Distance 250 m > 500 > 1000, 3000m; Time 2 > Times 1, 3, 4, 5, 6, 7; 8

¹ A p value of more than 0.05 is considered to be statistically non-significant.



Least square means of ANOVA on barium as a function of Distance, Survey and Distance X Survey at the Venture platform.



Least square means of ANOVA on TPH as a function of Distance, Survey and Distance X Survey at the Venture platform.

1.6 Sediment Chemistry at Thebaud

1.6.1 Near-Field vs. Far-Field

Differences between the near-field and the far-field were evaluated for six survey dates (June 1998, June 1999, November 1999, November 2000, June 2001 and July 2002), using ANOVA and testing for effects due to Field, Survey, and Field×Survey). Data were log-transformed to improve the homogeneity of the variance.

At Thebaud, the baseline survey (Survey 1) was carried out in June 1998, with two drilling surveys (Survey 3, June 1999 and Survey 4, November 1999), and subsequent production surveys. There was no survey carried out at Thebaud at Survey 2 (November 1998), and only near-field stations were sampled at Survey 5 (June 2000). The barium and TPH concentrations were higher overall in the near-field than in the far-field. The TPH concentration was also higher at Survey 3 (June 1999) than at other times. For barium, there was significant difference between near and far fields but not between surveys. For TPH, there were significant differences between surveys.

Overall, the differences associated with barium and TPH appear may be indicative of effects attributable to drilling. These effects are explored in more detail below, by examining the significance of variation within the near-field zone. The differences observed for other variables appear to reflect large-scale environmental or temporal variability.

1.6.2 Within the Near-Field Area

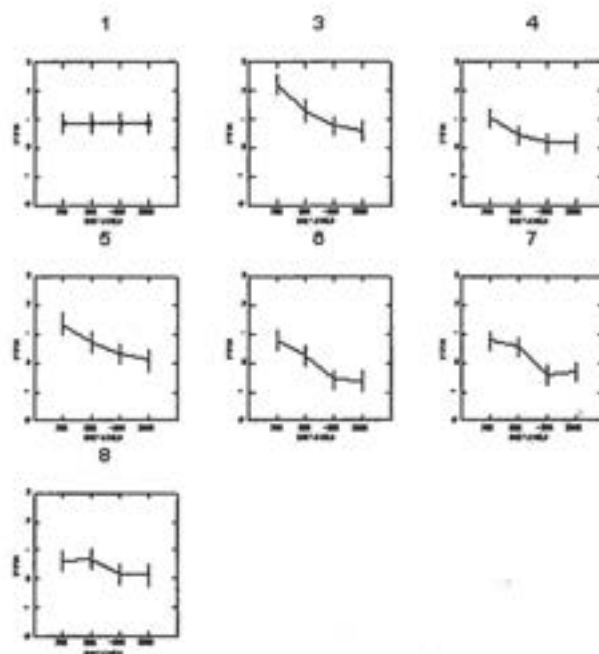
Within the near-field area at Thebaud, effects due to Distance, Survey, and the Distance×Survey interaction were tested using ANOVA (Table 1.2). For barium, there were no Survey effects indicating that barium concentrations overall have not changed over the period of monitoring. There were, however, significant Distance effects, indicating that barium concentrations 250 m distant from the platform are higher than concentrations at 500, 1,000 and 3,000 m; and that concentrations at 500 m are greater than at 1,000 m. In 2002, barium did not decrease within 250 and 500 m along Axis 3.

For TPH, significant differences were identified due to Distance and Survey. The Distance effect was attributable to the fact that overall TPH concentrations decreased with distance from the Thebaud platform. The Survey effect was due to higher overall TPH concentrations at Survey 3 (June 1999) than at other times. Although there was no significant Distance×Survey interaction term, these changes were considered to be attributable to drilling activities. The observed TPH concentrations ranged from 0 to 1,550 mg/kg at a distance of 250 m from the drilling platform (median value 5.0 mg/kg), but concentrations dropped rapidly with increasing distance. The observed concentrations at the 500 m distance ranged from 0 to 564 mg/kg (median value 1.4 mg/kg), and at 1000 m distance, the range of values was 0 to 35.5 mg/kg (median value 0.1 mg/kg). In June 2001, TPH concentrations of 360 and 564 mg/L were detected at distances of 250 m and 500 m, respectively, on Axis 3. All other TPH results for the

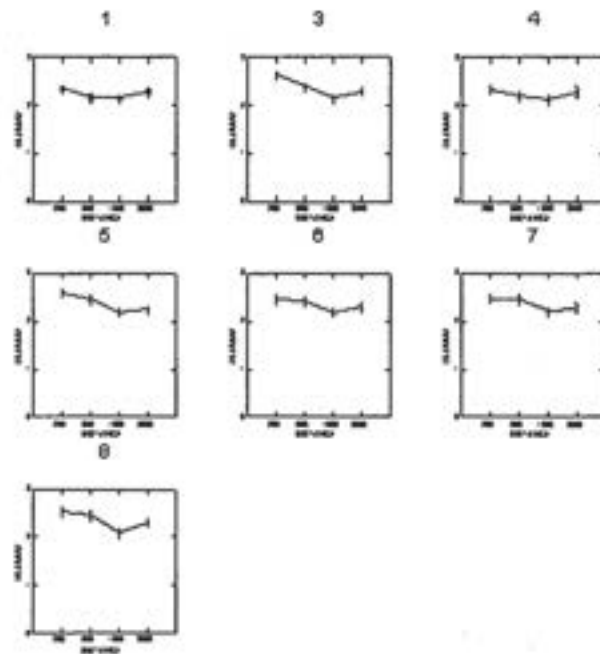
area around the Thebaud platform were non-detectable. In July 2002, TPH concentrations of 468 mg/kg and 146 mg/kg were detected at 250 m and 500 m on Axis 3, respectively.

Table 1.2 Tests for Significant Differences Due to Distance, Time, or the Distance×Time Interaction at Thebaud, using Nested ANOVA.

Variable	Probability (p) of Difference Being Significant (*) or Highly Significant (**)			
	Distance	Time	Distance×Time	Comment
Barium	p<0.0001**	p=0.198	p=0.950	250 m > 500, 1000, 3000 m; 500 m > 1000 m.
TPH	p<0.0001**	p<0.0001**	p=0.867	Time 3 > 1, 4, 6, 7; 250 m > 500 m > 1000, 3000 m.



Least square means of ANOVA on barium as a function of Distance, Survey and Distance×Survey at the Thebaud platform.



Least square means of ANOVA on TPH as a function of Distance, Survey and DistanceXSurvey at the Thebaud platform.

1.7 Sediment Chemistry at North Triumph

1.7.1 Near-Field vs. Far-Field

Differences between the near-field and the far-field were evaluated for seven survey dates, using nested ANOVA (testing for effects due to Field, Survey, and Field×Survey), and data that were log-transformed to improve the homogeneity of the variance. At North Triumph, two baseline surveys were carried out, in November 1998 and June 1999. The first drilling survey was carried out in November 1999. Drilling continued in 2000, however, after January 1, 2000, all drill cuttings were collected at the drilling platform and shipped elsewhere for disposal.

For barium, a significant difference was detected between near-field and far-field areas, indicating that barium concentrations in the near-field have been higher, overall, than those in the far-field. No significant effects due to Survey or the interaction term were detected.

For TPH, a significant difference was also detected between near-field and far-field areas, again indicating that TPH concentrations in the near-field have been higher overall than those in the far-field. However, for TPH there was also a significant difference due to Survey, and a significant Field×Survey interaction. The Survey effect indicated that TPH was higher in November 1999 than any other time, and that the TPH concentrations measured in June 2001 were lower overall than at any other time. The interaction term indicated that TPH concentrations were higher in the near-field than in the far-field in November 1999 and June 2000, but that there have not been significant differences between near-field and far-field at other times.

1.7.2 Within the Near-Field Area

Within the near-field area, effects due to Distance, Survey, and the Distance×Survey interaction were tested using nested ANOVA (Table 1.3). Most significant effects were attributable to change over Time, however, there were some significant Distance and Distance×Survey effects.

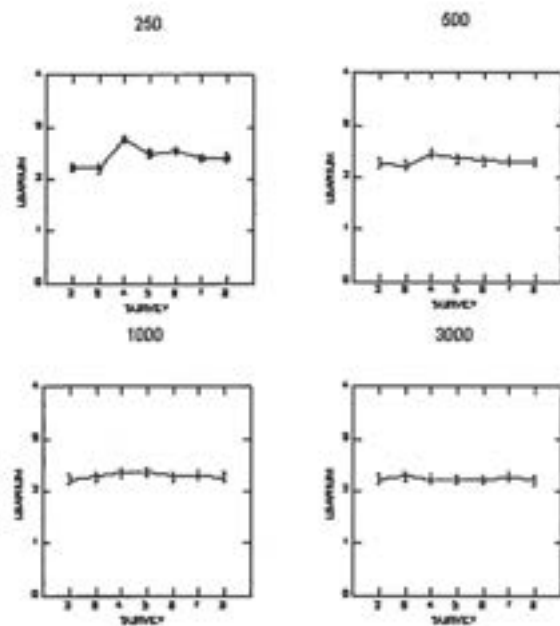
For barium, the significant Distance effect indicated that concentrations were higher at the 250 m distance than at the 500 or 3,000 m distances. Significant Time effects indicated that the barium concentrations in November 1999 were higher overall than in November 1998 or June 1999. Barium concentrations since November 1999 have been declining. There is a continue decrease in barium levels in sediments within 250 m of the platform since 1999, however a peak appeared in 2002 along axis 7 indication that barium is persistent and drill wastes is patchy. Barium concentrations beyond 250 m is stable and within background levels.

For TPH, the significant Distance effect indicated that TPH concentrations at the 250 m distance are higher overall than at 500, 1,000 or 3,000 m. Significant Survey effects indicate that the TPH concentration was higher in November 1999 than in baseline surveys (November 1998, and June 1999) and post-drilling surveys in November 2000, June 2000 or July 2002. The significant interaction term showed that although there were no significant differences due to

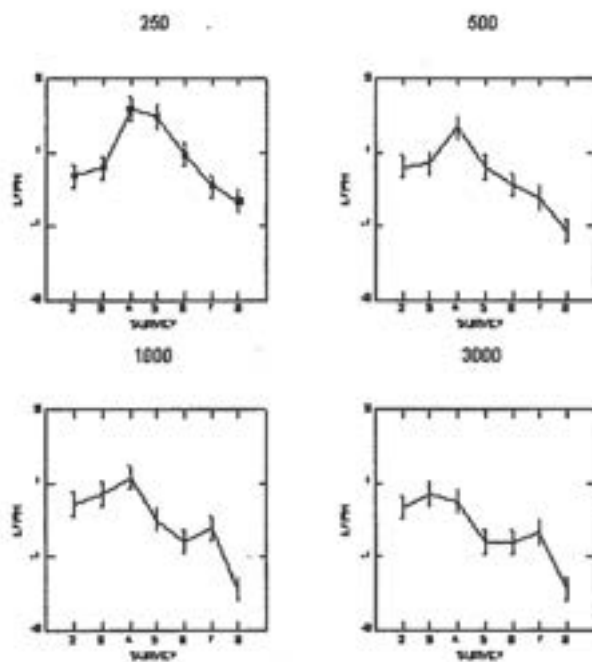
Distance in November 1998, June 1999 (baseline), June 2001 or July 2002, TPH concentrations were elevated at 250 m on Axis 1, 5 and 7 in November 1999, June 2000, and November 2000, declining to near baseline levels between 500 and 3,000 m distance. Since 2000, there is apparently a considerable decrease in sediment TPHs within 250 and 500 m compared to background levels. TPH remains highest on Axis 7 in the prevailing current direction.

Table 1.3 Tests for Significant Differences Due to Distance, Survey, or the Distance×Survey Interaction at North Triumph, using Nested ANOVA.

Variable	Probability (p) of Difference Being Significant (*) or Highly Significant (**)			
	Distance	Survey	Distance×Survey	Comment
Barium	p=0.0015*	p<0.0001*	p=0.343	250 m > 500, 3000 m. Time 4 > 2, 3.
TPH	p<0.0001**	p<0.0001**	p=0.010*	Time 4 > 1, 6, 7, 8 250 m > 500 m > 1000, 3000 m.



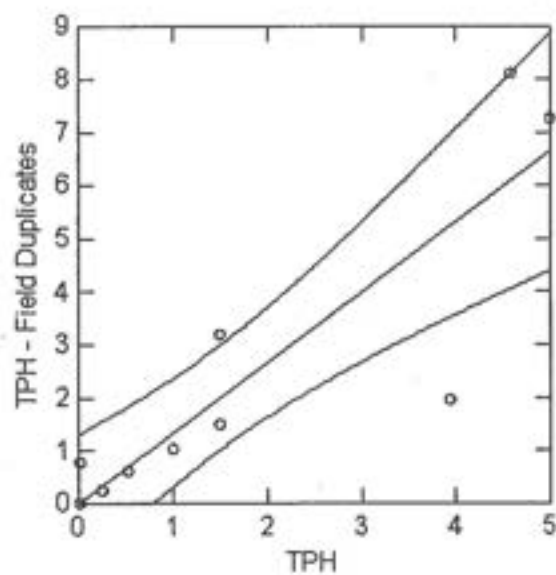
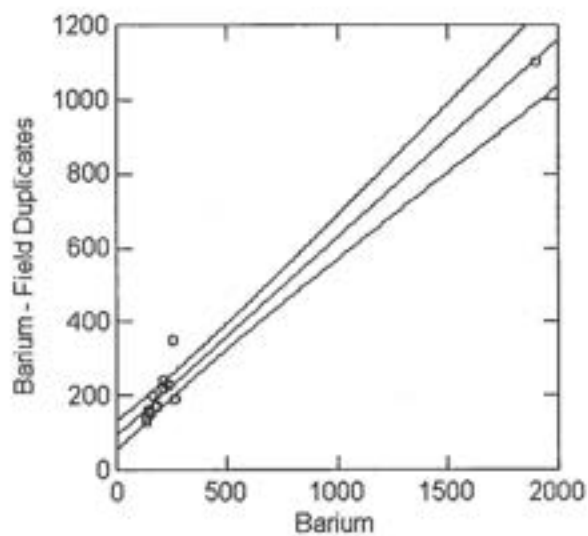
Least square means of ANOVA on barium as a function of Distance, Survey and DistanceXSurvey at the North Triumph Platform.



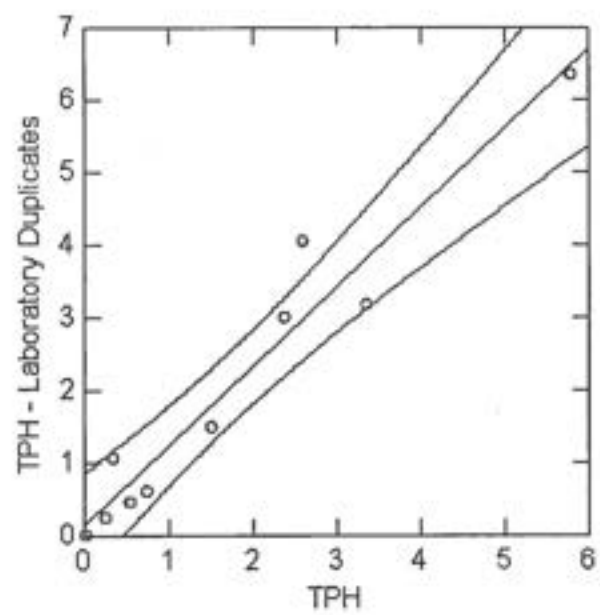
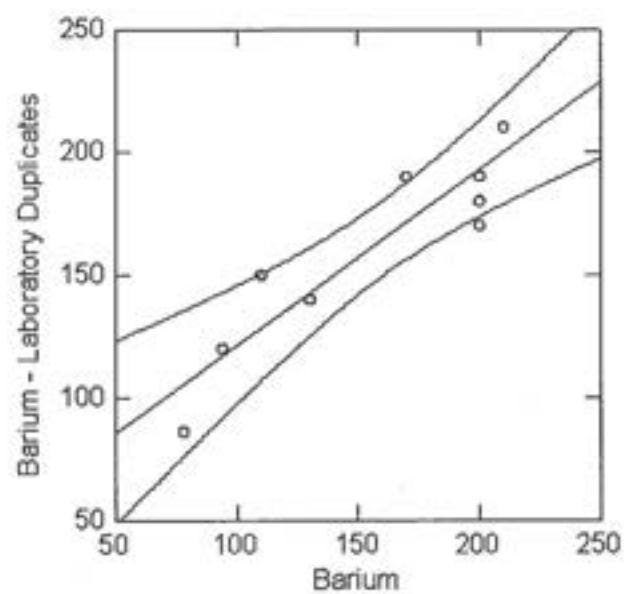
Least square means of ANOVA on TPH as a function of Distance, Survey and DistanceXSurvey at the North Triumph platform.

QA/QC Scatterplots of duplicate data (field and laboratory) for barium and TPH levels for North Triumph, Venture and Thebaud platforms.

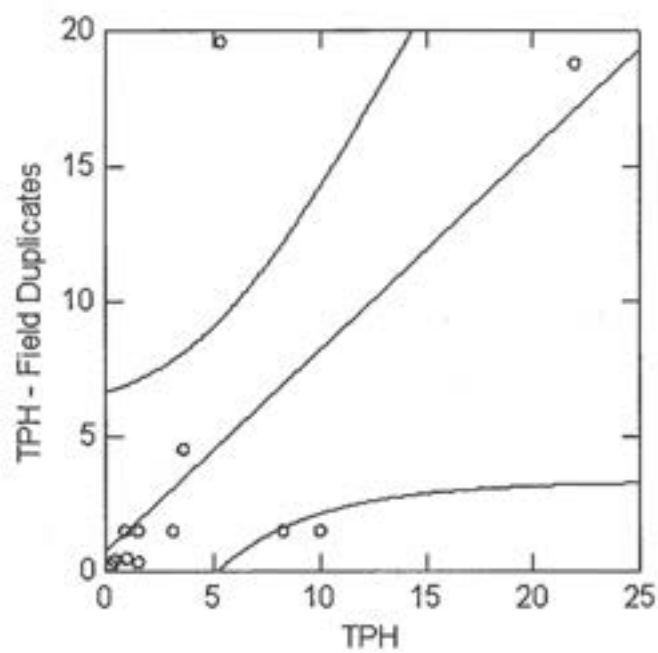
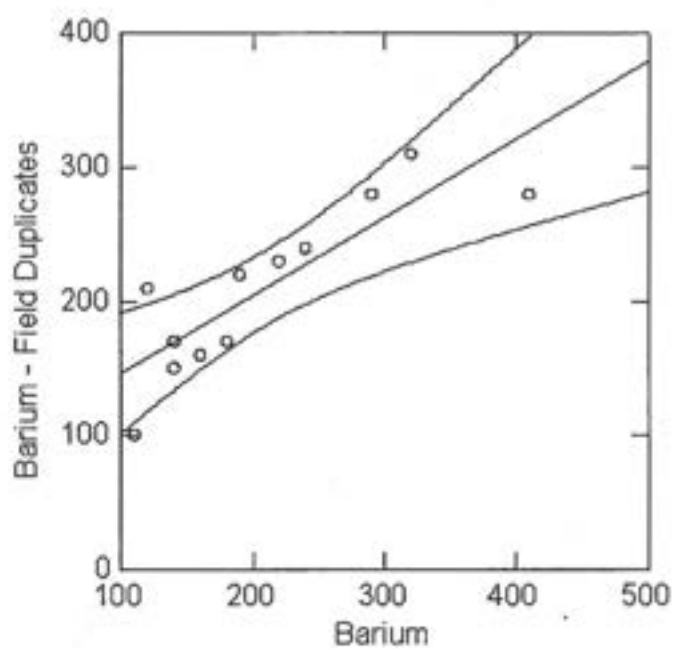
North Triumph; Field Duplicates



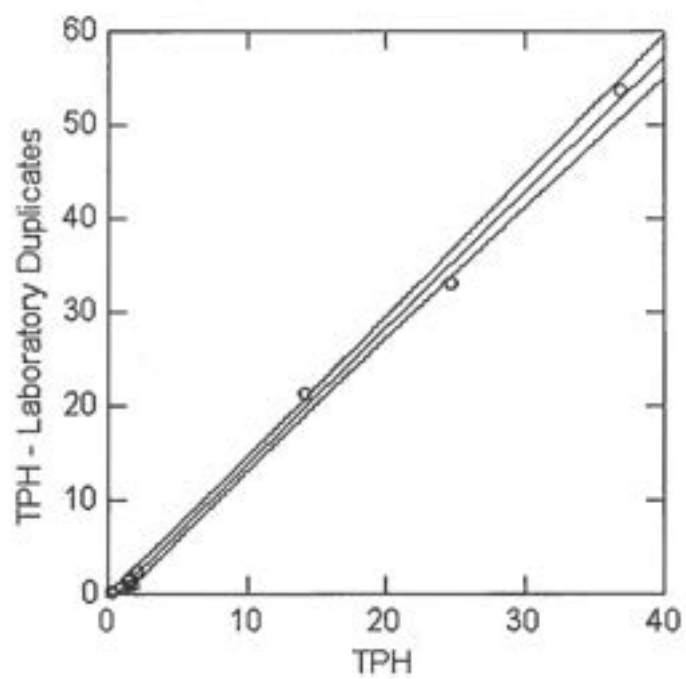
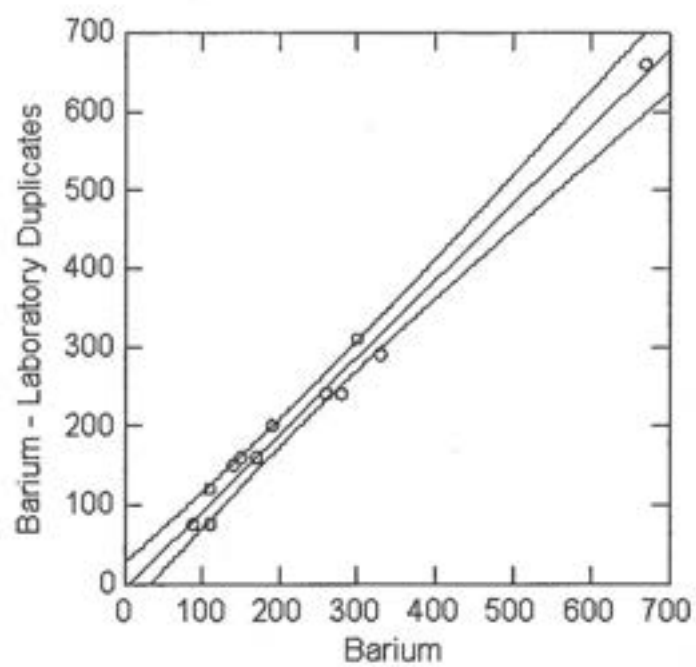
North Triumph; Laboratory Duplicates



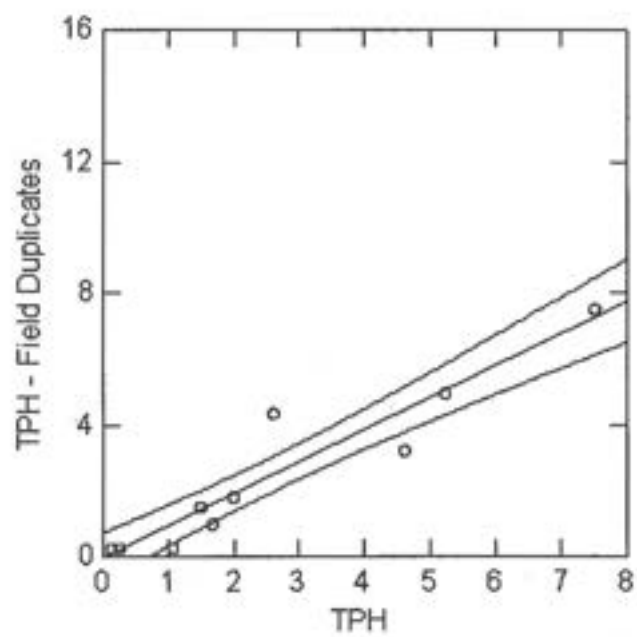
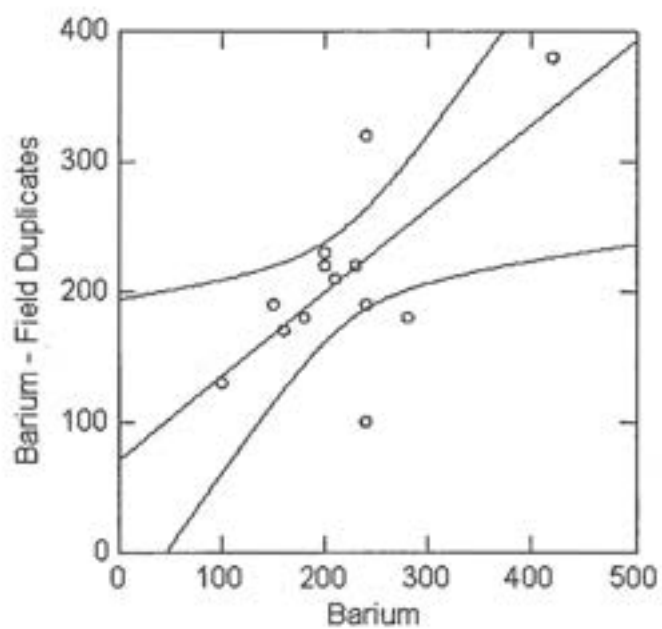
Thebaud; Field Duplicates



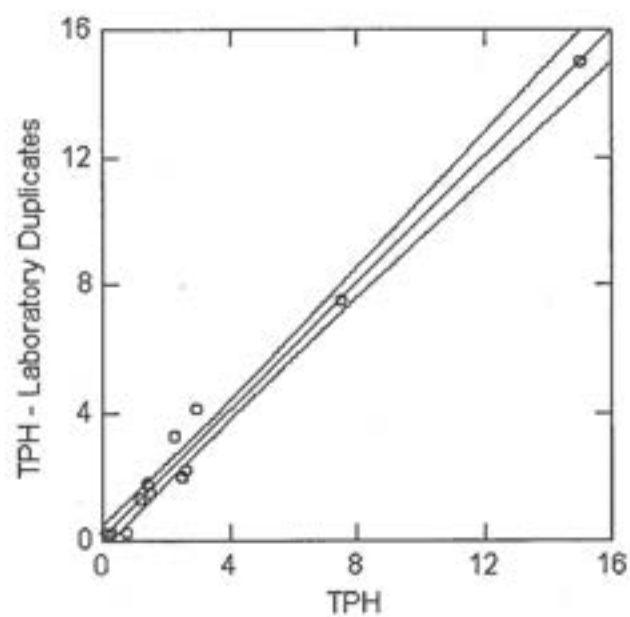
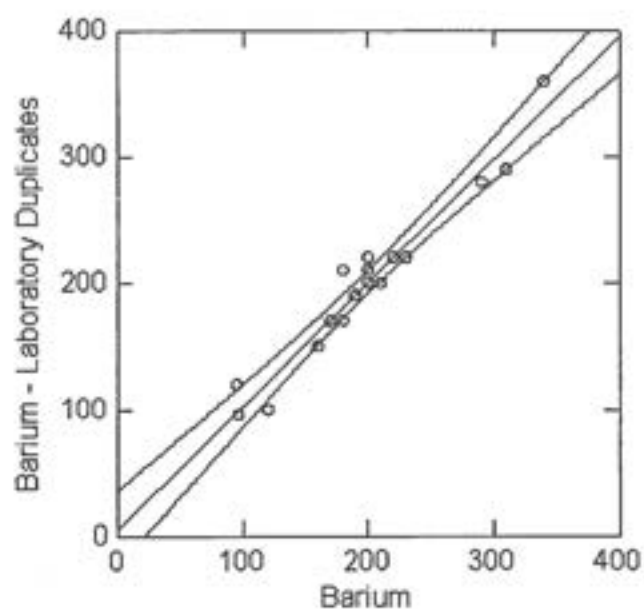
Thebaud; Laboratory Duplicates



Venture; Field Duplicates



Venture; Laboratory Duplicates



2.0 Benthic Habitat and Community

Hypotheses

The distribution and abundance of mega-epifaunal species (primarily sand dollars and brittle stars in the areas presently under study) is used in conjunction with sediment chemistry and toxicity results to provide a holistic assessment of sediment quality, and assess whether a correlation exists among the triad of parameters. The study design was intended to address specific questions, and to allow the testing of specific null hypotheses, regarding the potential effects of drilling on the marine environment. Monitoring of epibenthic megafauna is intended to answer the following questions.

- Has benthic habitat and epifaunal species relative abundance changed with distance from each drilling site? If so, are these changes correlated with sediment chemistry and toxicity?
- Are changes in benthic habitat consistent or prolonged with time along a gradient?
- Is benthic habitat and epifaunal species abundance useful as an EEM candidate attribute?

The key null hypothesis with respect to the effects of drilling activity on the benthic epifauna was:

H_0 : the population density of observed epifaunal organisms has not been changed by the drilling operation.

Rejection of this null hypothesis would lead to acceptance of the alternative hypothesis, that drilling activities have resulted in changes in the population density of the observed epibenthic organisms.

APPENDIX B
SEDIMENT CHEMISTRY

APPENDIX B

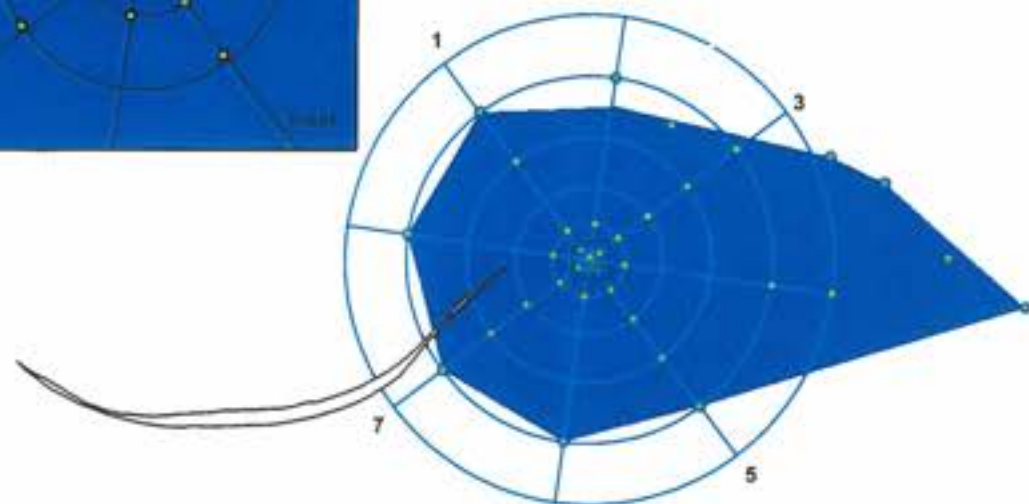
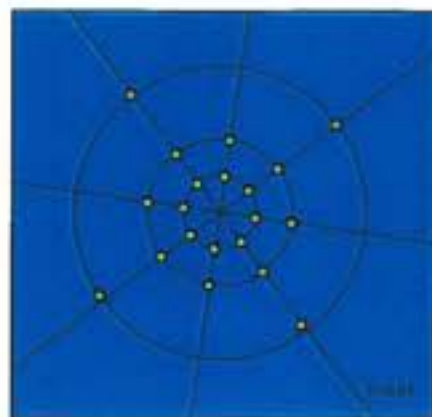
Laboratory Analytical Data for Sediment from "The Gully" and Venture Field

- June 1998 Gully Data
- November 1998 Gully Data
- June 1999 Gully Data
- November 1999 Gully Data
- June 2000 Gully Data
- November 2000 Gully Data
- June 2001 Gully Data
- July 2002 Gully Data

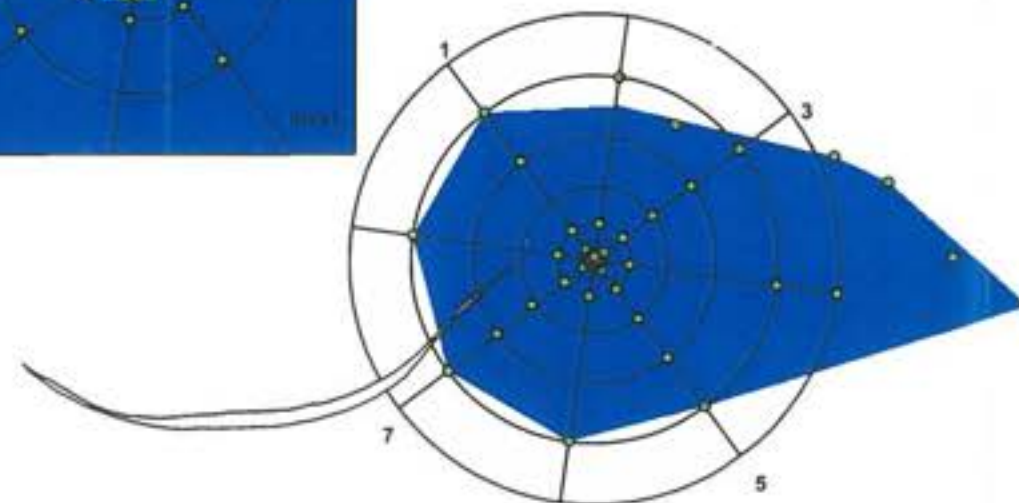
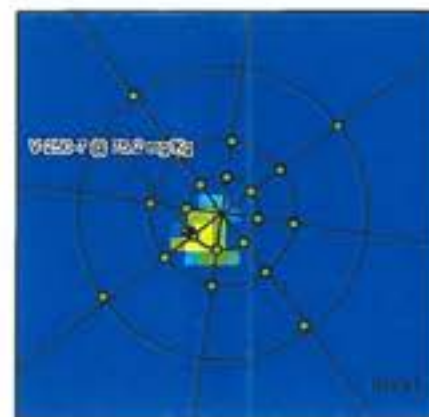
- June 1998 Venture Data
- November 1998 Venture Data
- June 1999 Venture Data
- November 1999 Venture Data
- June 2000 Venture Data
- November 2000 Venture Data
- June 2001 Venture Data
- July 2002 Venture Data

**Laboratory Analytical Data for Sediment
from "The Gully", June 1998**

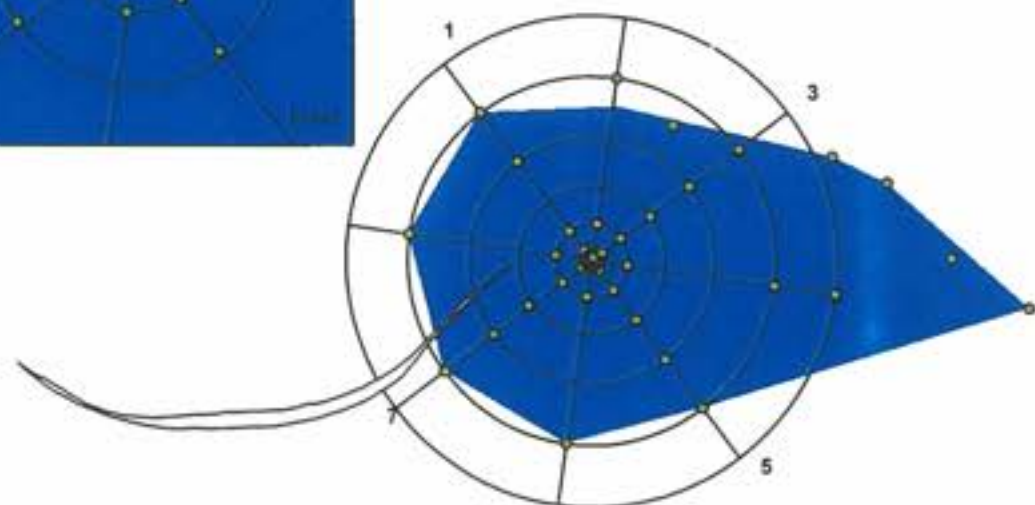
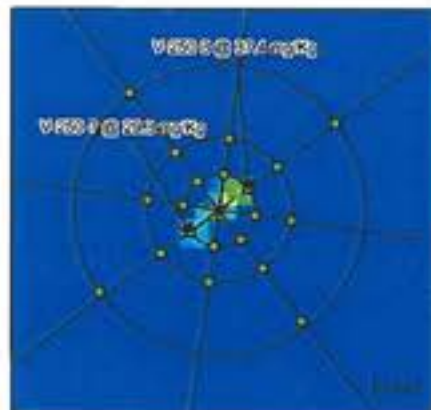
- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity



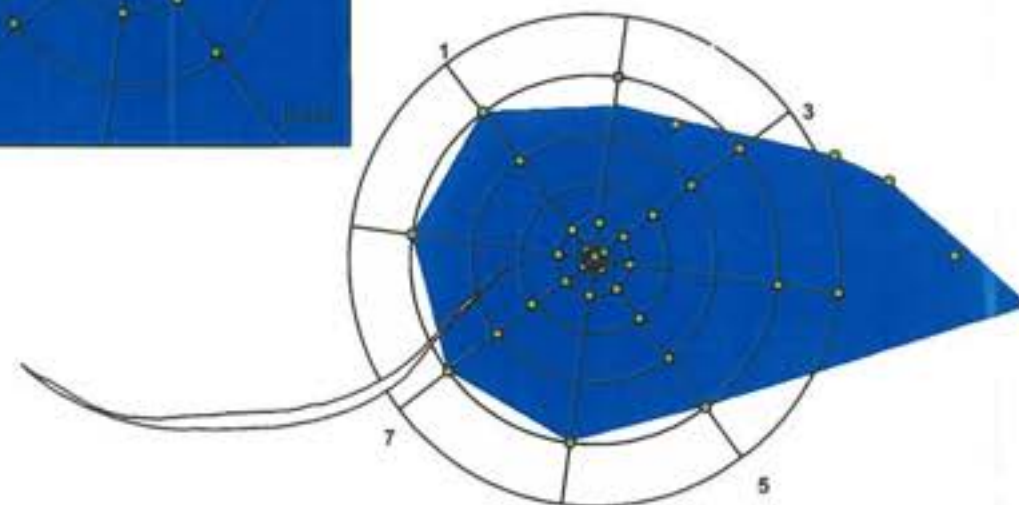
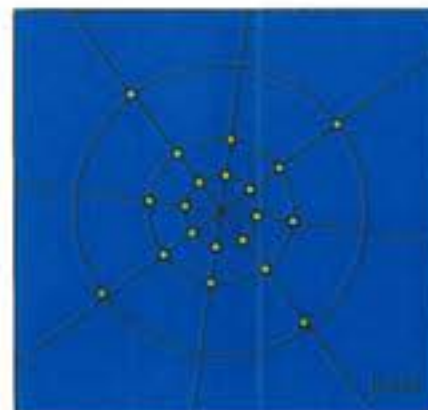
Baseline
June 1998



Nov. 1998

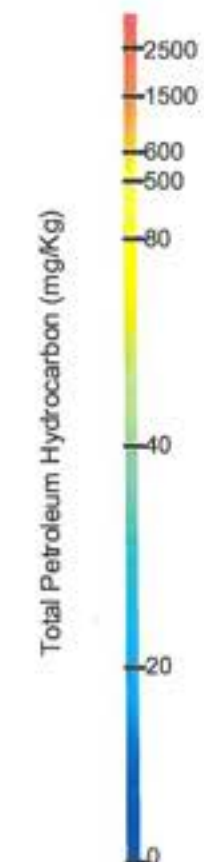


June 1999



Nov. 1999

LEGEND



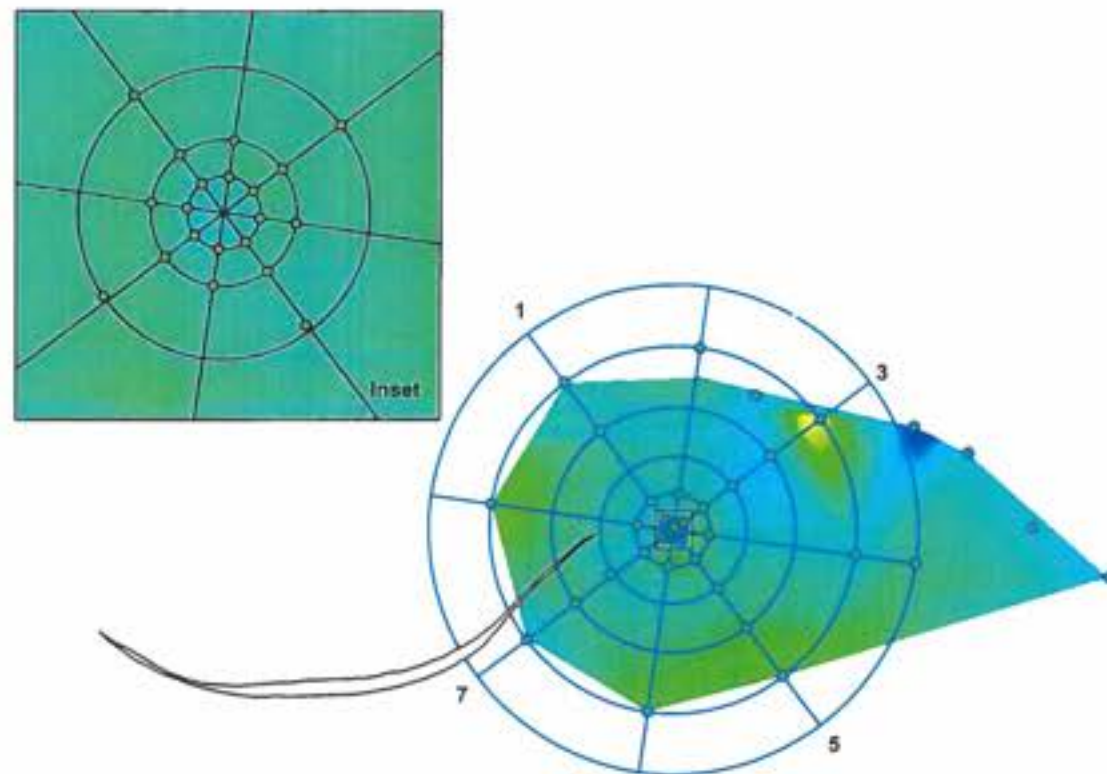
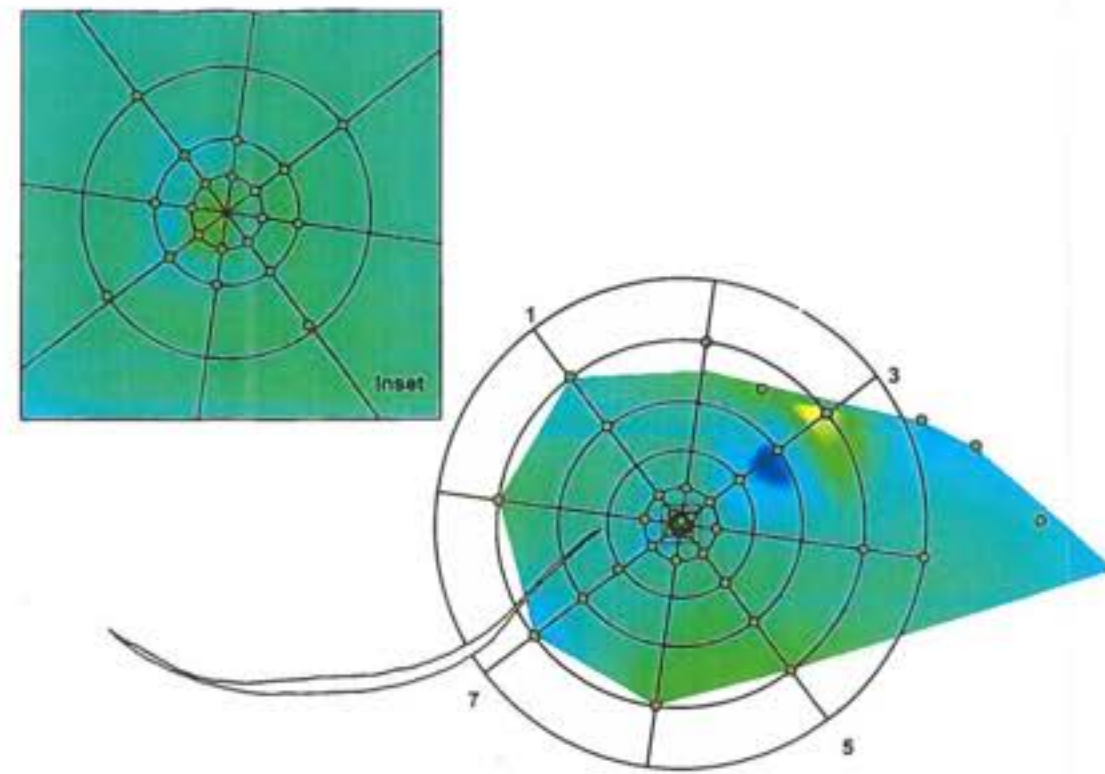
● Sample Locations

Appendix B (1 of 2) TOTAL PETROLEUM HYDROCARBONS IN SEDIMENT

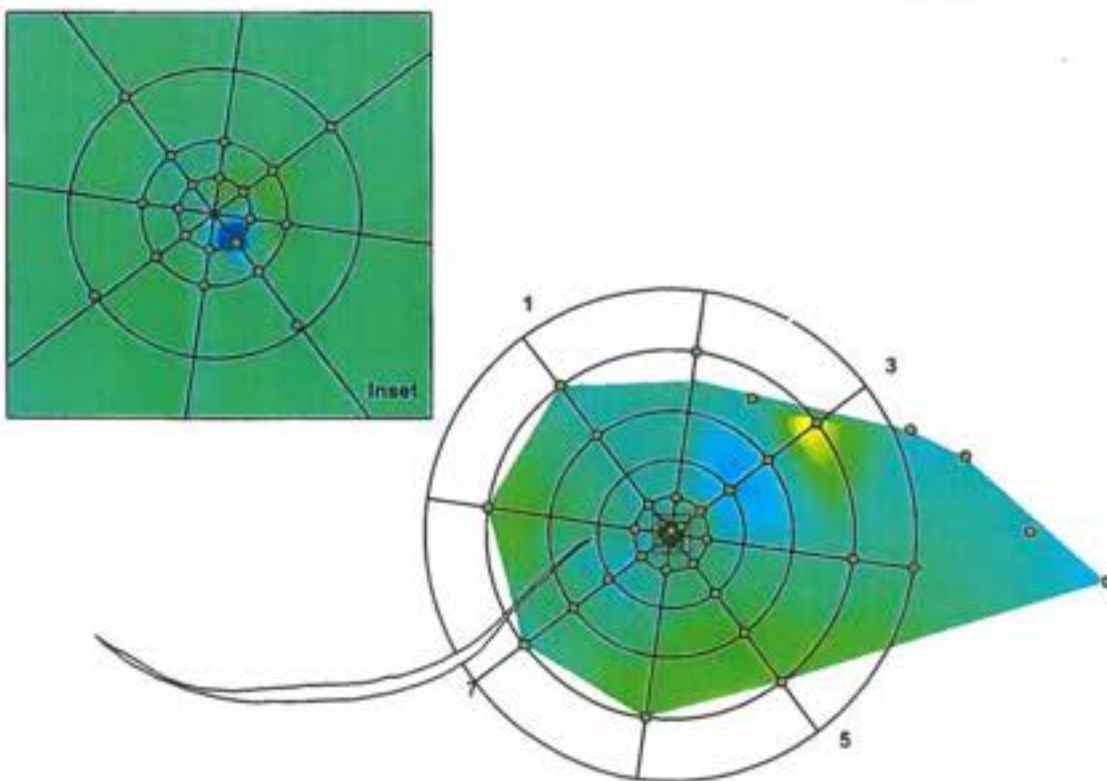
Venture Well & Gully Sites



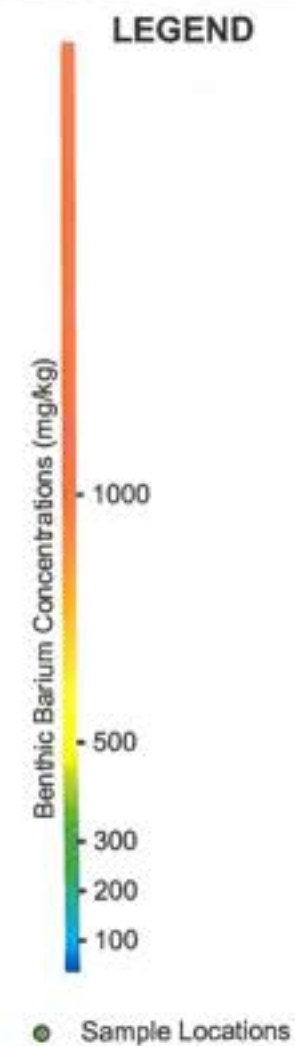
Jacques Whitford
Environment Limited

Baseline
June 1998

Nov. 1998



June 1999

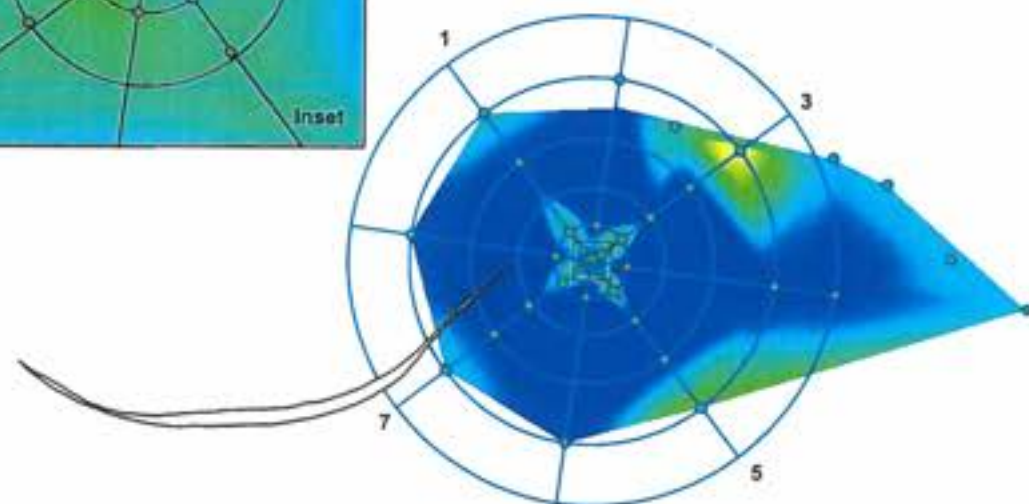
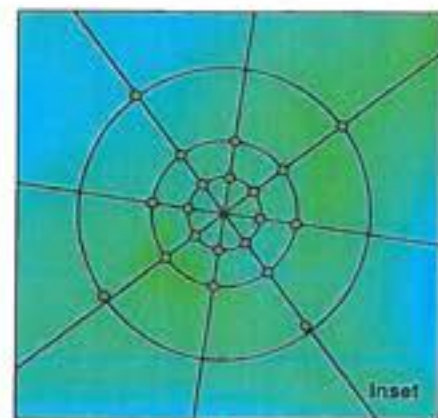


- Sample Locations

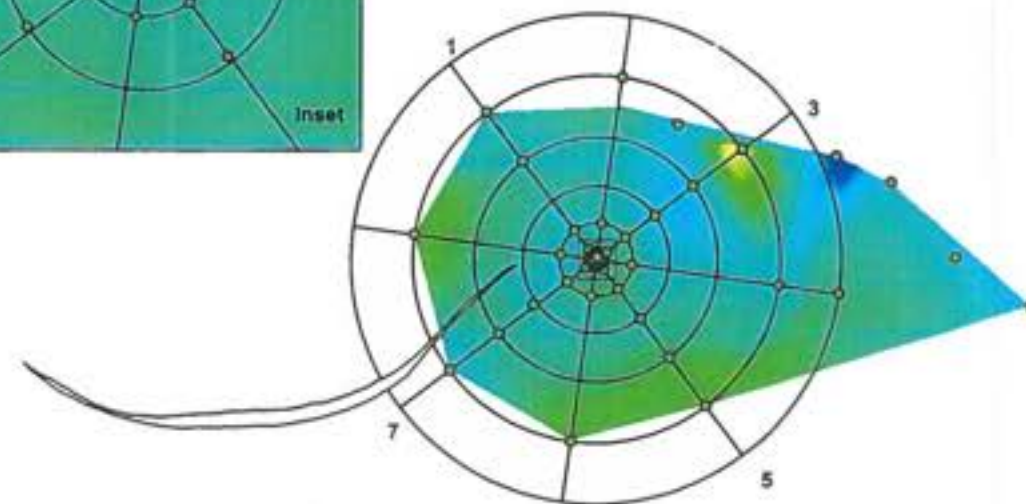
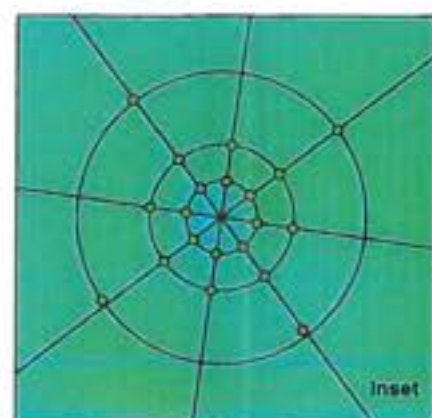
Appendix B (1 of 2)
SEDIMENT BARIUM
CONCENTRATIONS

Venture Well & Gully Sites

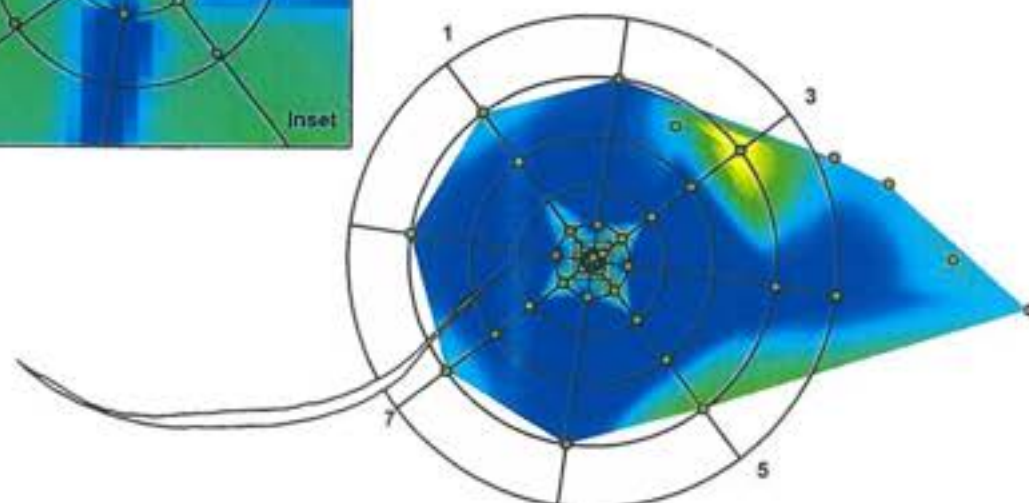
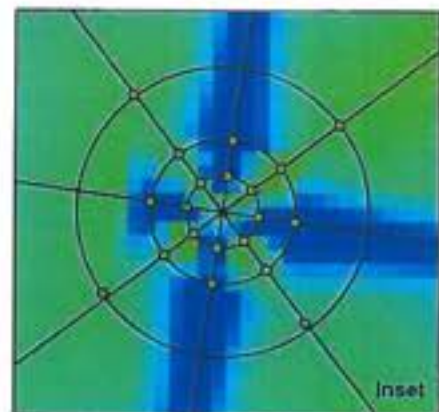




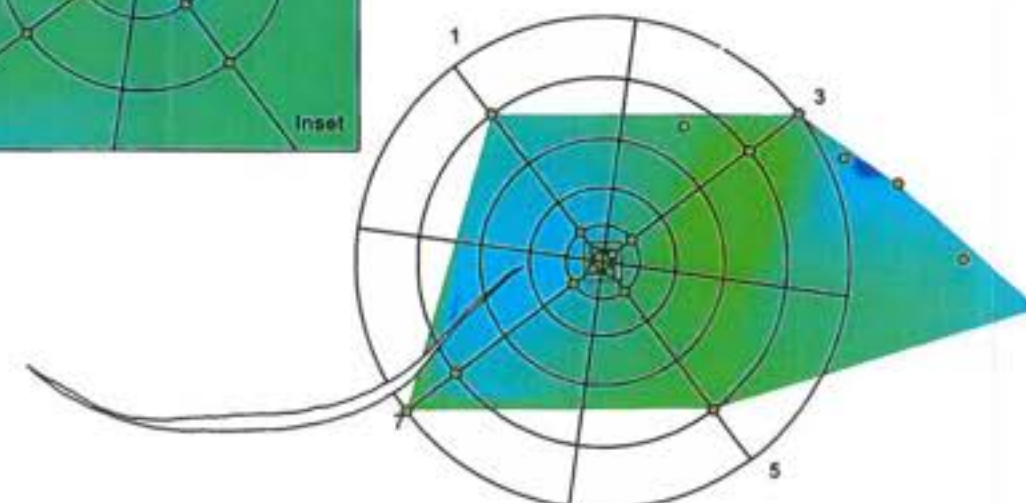
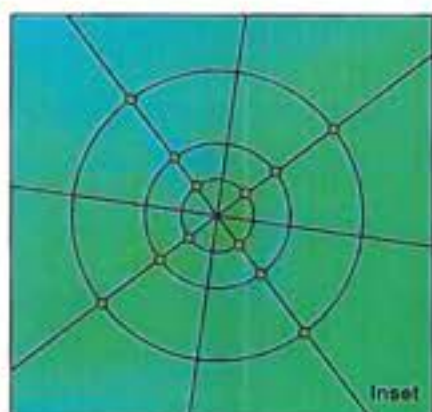
June 2000



Nov. 2000



July 2001



July 2002

LEGEND



● Sample Locations

Appendix B (2 of 2) SEDIMENT BARIUM CONCENTRATIONS

Venture Well & Gully Sites



TABLE 1a: Trace Elements at Gully Stations - June 1998

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg
Gully 1		7420	<2	<2	120	<5	<5	<0.3	3	<1	<2
Gully 2		4700	<2	<2	78	<5	<5	<0.3	<2	<1	<2
Gully 3		6970	<2	<2	120	<5	<5	<0.3	3	<1	<2
Gully 4		7960	<2	<2	130	<5	<5	<0.3	2	<1	<2
Gully 4	Lab Dup.	7910	<2	<2	150	<5	<5	<0.3	2	<1	<2
Gully 5		6240	<2	<2	110	<5	<5	<0.3	2	<1	<2

Unique_station_id	Replicate_id	Iron mg/kg	Lead mg/kg	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg
Gully 1		1400	2.8	<5	24	<2	0.01	<2	<2	34	0.1
Gully 2		610	2.00	<5	6	<2	<0.01	<2	<2	19	0.10
Gully 3		1300	3.00	<5	17	<2	<0.01	<2	<2	28	0.10
Gully 4		1100	3.70	<5	19	<2	<0.01	<2	<2	32	0.10
Gully 4	Lab Dup.	950	3.70	<5	19	<2	<0.01	<2	<2	34	0.10
Gully 5		630	2.80	<5	11	<2	<0.01	<2	<2	26	0.10

Unique_station_id	Replicate_id	Ti mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
Gully 1		<2	0.2	5	7
Gully 2		<2	0.20	2	5
Gully 3		<2	0.20	4	6
Gully 4		<2	0.20	3	6
Gully 4	Lab Dup.	<2	0.20	3	6
Gully 5		<2	0.10	2	5

TABLE 2a: Petroleum Hydrocarbons at Gully Stations - June 1998

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₅ mg/kg	C ₁₆ -C ₂₁ mg/kg	TMH (C ₁₁ -C ₂₁) mg/kg	TPH mg/kg
Gully 1		<0.025	<0.025	<0.025	<0.05	<2.5	<15.0	<15.0	<30.0	<32.5
Gully 2		<0.025	<0.025	<0.025	<0.05	<2.5	<15.0	<15.0	<30.0	<32.5
Gully 3		<0.025	<0.025	<0.025	<0.05	<2.5	<15.0	<15.0	<30.0	<32.5
Gully 4		<0.025	<0.025	<0.025	<0.05	<2.5	<15.0	<15.0	<30.0	<32.5
Gully 4	Lab Dup.	<0.025	<0.025	<0.025	<0.05	<2.5	<15.0	<15.0	<30.0	<32.5
Gully 5		<0.025	<0.025	<0.025	<0.05	<2.5	<15.0	<15.0	<30.0	<32.5

TABLE 3a: Polycyclic Aromatic Hydrocarbons at Gully Stations - June 1998

Unique_station_id	Replicate_id	Naphthalene mg/kg	2-Methylnaphthalene mg/kg	1-Methylnaphthalene mg/kg	Acenaphthylene mg/kg	Acenaphthene mg/kg
Gully 1		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 2		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 3		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 4		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 4	Lab Dup.	<0.05	<0.05	<0.05	<0.05	<0.05
Gully 5		<0.05	<0.05	<0.05	<0.05	<0.05

Unique_station_id	Replicate_id	Fluorene mg/kg	Phenanthrene mg/kg	Anthracene mg/kg	Fluoranthene mg/kg	Pyrene mg/kg
Gully 1		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 2		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 3		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 4		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 4	Lab Dup.	<0.05	<0.05	<0.05	<0.05	<0.05
Gully 5		<0.05	<0.05	<0.05	<0.05	<0.05

Unique_station_id	Replicate_id	Benz(a)anthracene mg/kg	Chrysene mg/kg	Benz(b)fluoranthene mg/kg	Benzo(a)fluoranthene mg/kg	Benzo(a)pyrene mg/kg
Gully 1		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 2		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 3		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 4		<0.05	<0.05	<0.05	<0.05	<0.05
Gully 4	Lab Dup.	<0.05	<0.05	<0.05	<0.05	<0.05
Gully 5		<0.05	<0.05	<0.05	<0.05	<0.05

Unique_station_id	Replicate_id	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
Gully 1		<0.05	<0.05	<0.05	<0.05
Gully 2		<0.05	<0.05	<0.05	<0.05
Gully 3		<0.05	<0.05	<0.05	<0.05
Gully 4		<0.05	<0.05	<0.05	<0.05
Gully 4	Lab Dup.	<0.05	<0.05	<0.05	<0.05
Gully 5		<0.05	<0.05	<0.05	<0.05

TABLE 4a: Sediment Quality at Gully Stations - June 1998

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
Gully 1		<0.10	0.30	0.8	98.3	0.1	0.8	0.0002	<0.3
Gully 2		0.10	0.20	0.9	98.3	<0.1	0.8	0.0004	<0.3
Gully 3		0.10	0.20	<0.1	99.2	<0.1	0.8	0.0005	<0.3
Gully 4		0.10	0.20	<0.1	99.2	<0.1	0.8	0.0002	<0.3
Gully 4	Lab Dup.	0.10	0.20	<0.1	99.2	<0.1	0.8		
Gully 5		0.20	0.20	<0.1	99.1	<0.1	0.9	0.0008	<0.3

TABLE 5a: Toxicity at Gully Stations - June 1998

Unique station_id	Replicate_id	Amphipod Mortality %	Survival Control Mortality %	Echleoid Fertilization % Fertilization	Allicorax EC50
Gully 1		7	1	1.3	>100%
Gully 2		6	1	2.3	>100%
Gully 3		4	1	58	>100%
Gully 4		11	1	88.5	>100%
Gully 4	Lab Dup.				
Gully 5		5	1	90.5	>100%

**Laboratory Analytical Data for Sediment
from "The Gully", November 1998**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at Gully Stations - November 1998

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg
Gully 1		13000	< 2	2	260	< 5	< 5	< 0.3	8	1	2
Gully 2		6200	< 2	2	97	< 5	< 5	< 0.3	2	< 1	< 2
Gully 2	Lab Dup.										
Gully 3		6290	< 2	< 2	100	< 5	< 5	< 0.3	2	< 1	< 2
Gully 4		8180	< 2	< 2	130	< 5	< 5	< 0.3	2	< 1	< 2
Gully 5		6360	< 2	< 2	110	< 5	< 5	< 0.3	< 2	< 1	< 2
Gully 5	Lab Dup.	6200	< 2	< 2	99	< 5	< 5	< 0.3	< 2	< 1	< 2

Unique_station_id	Replicate_id	Iron mg/kg	Lead mg/kg	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg
Gully 1		5000	6.6	< 5	100	< 2	< 0.01	2	< 2	61	0.2
Gully 2		1800	2.5	< 5	12	< 2	< 0.01	< 2	< 2	24	0.1
Gully 2	Lab Dup.										
Gully 3		831	2.5	< 5	8	< 2	< 0.01	< 2	< 2	31	0.1
Gully 4		1190	3.3	< 5	22	< 2	< 0.01	< 2	< 2	34	0.1
Gully 5		550	2.8	< 5	8	< 2	< 0.01	< 2	< 2	28	0.1
Gully 5	Lab Dup.	490	2.8	< 5	7	< 2	< 0.01	< 2	< 2	26	0.1

Unique_station_id	Replicate_id	TiO mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
Gully 1		< 2	0.3	13	11
Gully 2		< 2	0.2	5	6
Gully 2	Lab Dup.				
Gully 3		< 2	0.2	3	7
Gully 4		< 2	0.1	4	7
Gully 5		< 2	0.1	2	8
Gully 5	Lab Dup.	< 2	0.1	2	8

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Gully Stations - November 1998

Unique_station_id	Replicate_id	Naphthalene mg/kg	1-Methylnaphthalene mg/kg	1-Methylnaphthalene mg/kg	Acenaphthylene mg/kg	Acenaphthene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2	Lab Dup.					
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Fluorene mg/kg	Phenanthrene mg/kg	Anthracene mg/kg	Fluoranthene mg/kg	Pyrene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2	Lab Dup.					
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Benz(a)anthracene mg/kg	Chrysene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benz(a)pyrene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2	Lab Dup.					
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benz(ghi)perylene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05
Gully 2	Lab Dup.				
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05
Gully 5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4b: Sediment Quality at Gully Stations - November 1998

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
Gully 1		0.1	0.4	0.1	98.7	0.1	1.1	0.0010	<0.3
Gully 2		0.2	0.2	0.8	98.4	< 0.1	0.7	0.0003	0.53
Gully 2	Lab Dup.								
Gully 3		0.1	0.2	0.1	99.1	< 0.1	0.8	0.0008	1.40
Gully 4		0.1	0.2	0.5	98.6	< 0.1	0.8	0.0020	0.48
Gully 5		0.2	0.2	0.8	98.4	< 0.1	0.8	0.0007	1.00
Gully 5	Lab Dup.			2.7	96.4	0.1	0.8		

TABLE 5b: Toxicity at Gully Stations - November 1998

Unique station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Ecklooid Fertilization		Microtox EC50
				Mortality %	Control Mortality %	% Fertilization	IC 50	
Gully 1				8	2	4.30		>100%
Gully 2		1.63	<.05	2	2	59.70		>100%
Gully 2	Lab Dup.			1	2	60.30		
Gully 3		0.1	<0.05	2	2	21.00		>100%
Gully 4		<0.05	<0.05	0	2	65.00		>100%
Gully 5		0.06	<0.05	13	2	45.30		>100%
Gully 5	Lab Dup.							

**Laboratory Analytical Data for Sediment
from "The Gully", June 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1c: Trace Elements at Gully Stations - June 1999

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg
Gully 1		7800	<2	<2	150	<5	<5	<0.3	3	<1	<2
Gully 2		5900	<2	2	130	<5	<5	<0.3	2	<1	<2
Gully 3		6500	<2	2	140	<5	<5	<0.3	2	<1	<2
Gully 4		8200	<2	<2	140	<5	<5	<0.3	2	<1	<2
Gully 5		6200	<2	<2	110	<5	<5	<0.3	<2	<1	<2

Unique_station_id	Replicate_id	Iron mg/kg	Lead mg/kg	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Strontium mg/kg
Gully 1		1500	3.7	<5	18	<2	<0.01	<2	<2	<0.5	35
Gully 2		1100	2.3	<5	14	<2	<0.01	<2	<2	<0.5	28
Gully 3		1200	3.2	<5	13	<2	<0.01	<2	<2	<0.5	29
Gully 4		1100	3.4	<5	16	<2	<0.01	<2	<2	<0.5	36
Gully 5		480	2.4	<5	11	<2	<0.01	<2	<2	<0.5	28

Unique_station_id	Replicate_id	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
Gully 1		0.1	<2	0.2	5	5
Gully 2		0.1	<2	0.1	4	18
Gully 3		0.1	<2	0.1	4	6
Gully 4		0.1	<2	0.1	4	4
Gully 5		0.1	<2	0.1	2	4

TABLE 2c: Petroleum Hydrocarbons at Gully Stations - June 1999

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₀ -C ₁₅ mg/kg	C ₁₅ -C ₂₀ mg/kg	Total (C ₁₀ -C ₂₀) mg/kg	TPH mg/kg
Gully 1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.851	1.8	2.65	2.65
Gully 2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.62	3.82	5.44	5.45
Gully 3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.55	3.44	4.99	4.99
Gully 4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.75	3.38	5.13	5.13
Gully 5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.92	3.29	5.21	5.21

TABLE 3c: Polycyclic Aromatic Hydrocarbons at Gully Stations - June 1999

Unique_station_id	Replicate_id	Naphthalene mg/kg	2-Methylnaphthalene mg/kg	1-Methylnaphthalene mg/kg	Acenaphthylene mg/kg	Acenaphthene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Fluorene mg/kg	Phenanthrene mg/kg	Anthracene mg/kg	Fluoranthene mg/kg	Pyrene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Benz(a)anthracene mg/kg	Chrysene mg/kg	Benz(b)fluoranthene mg/kg	Benz(k)fluoranthene mg/kg	Benz(a)pyrene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benz(ghi)perylene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4c: Sediment Quality at Gully Stations - June 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
Gully 1		0.2	< 0.1	6.8	92.5	< 0.1	0.8	0.0005	0.22
Gully 2		0.2	< 0.1	0.3	98.8	0.1	0.8	0.0005	<0.20
Gully 3		0.2	< 0.1	0.1	98.9	0.2	0.9	0.0007	0.63
Gully 4		0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0004	0.20
Gully 5		0.3	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0010	<0.20

TABLE 5c: Toxicity at Gully Stations - June 1999

Unique_station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Eckisaid % Fertilization	Fertilization IC50	Microtox EC50
				Mortality	Control Mortality %			
Gully 1		4.27	<20	4	3	92.8	>100%	>100%
Gully 2		13.20	<20	5	3	91.0	>100%	>100%
Gully 3		8.38	<20	3	3	93.0	>100%	>100%
Gully 4		7.79	<20	5	3	94.5	>100%	>100%
Gully 5		7.20	<20	5	3	87.3	>100%	>100%

**Laboratory Analytical Data for Sediment
from "The Gully", November 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1d: Trace Elements at Gully Stations - November 1999

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg
Gully 1		6100	<2	<2	130	<5	<5	<0.3	3	<1	<2
Gully 2		4800	<2	<2	93	<5	<5	<0.3	2	<1	<2
Gully 3		5700	<2	<2	150	<5	<5	<0.3	<2	<1	<2
Gully 3	Field Dup.	6000	<2	<2	120	<5	<5	<0.3	2	<1	<2
Gully 4		4900	<2	<2	110	<5	<5	<0.3	<2	<1	<2
Gully 5		5300	<2	<2	110	<5	<5	<0.3	<2	<1	<2

Unique_station_id	Replicate_id	Iron mg/kg	Lead mg/kg	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Strontium mg/kg
Gully 1		1700	3.1	<5	29	<2	<0.01	<2	<2	<0.5	36
Gully 2		940	2.5	<5	8	<2	<0.01	<2	<2	<0.5	24
Gully 3		760	2.8	<5	7	<2	<0.01	<2	<2	<0.5	32
Gully 3	Field Dup.	1000	2.9	<5	12	<2	<0.01	<2	<2	<0.5	26
Gully 4		850	2.4	<5	16	<2	<0.01	<2	<2	<0.5	27
Gully 5		540	2.3	<5	10	2	<0.01	<2	<2	<0.5	28

Unique_station_id	Replicate_id	Thallium mg/kg	TiO mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
Gully 1		0.1	<2	0.3	5	5
Gully 2		0.1	<2	0.2	3	4
Gully 3		0.1	<2	0.2	2	4
Gully 3	Field Dup.	0.1	<2	0.2	3	4
Gully 4		0.1	<2	0.2	2	4
Gully 5		0.1	<2	0.1	2	4

TABLE 2d: Petroleum Hydrocarbons at Gully Stations - November 1999

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₁ -C ₁₀ mg/kg	C ₁₁ -C ₂₀ mg/kg	C ₂₁ -C ₃₀ mg/kg	TEH (C ₁₁ -C ₃₀) mg/kg	TPH mg/kg
Gully 1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 3	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3

TABLE 3d: Polycyclic Aromatic Hydrocarbons at Gully Stations - November 1999

Unique_station_id	Replicate_id	Naphthalene mg/kg	2-Methylnaphthalene mg/kg	1-Methylnaphthalene mg/kg	Acenaphthylene mg/kg	Acenaphthene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Fluorene mg/kg	Phenanthrene mg/kg	Anthracene mg/kg	Fluoranthene mg/kg	Pyrene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Benzo(a)anthracene mg/kg	Chrysene mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)pyrene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 3	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
Gully 1		< 0.05	< 0.05	< 0.05	< 0.05
Gully 2		< 0.05	< 0.05	< 0.05	< 0.05
Gully 3		< 0.05	< 0.05	< 0.05	< 0.05
Gully 3	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
Gully 4		< 0.05	< 0.05	< 0.05	< 0.05
Gully 5		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4d: Sediment Quality at Gully Stations - November 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon p/g	Total Org. Carbon p/g	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
Gully 1		0.3	< 0.1	1.9	97.2	< 0.1	0.9	0.0002	<0.20
Gully 2		0.2	0.1	0.1	99.2	0.1	0.7	0.0007	<0.20
Gully 3		0.3	0.1	< 0.1	99.2	< 0.1	0.8	0.0003	<0.20
Gully 3	Field Dup.	0.3	< 0.1	< 0.1	99	< 0.1	0.9	0.0003	0.22
Gully 4		0.3	< 0.1	0.1	99.2	0.1	0.6	0.0003	<0.20
Gully 5		0.4	< 0.1	0.3	98.9	< 0.1	0.7	0.0005	0.20

TABLE 5d: Toxicity at Gully Stations - November 1999

Unique_station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echinoid % Fertilization	Fertilization IC50	Microtox EC50
				Mortality %	Control Mortality %			
Gully 1		28.10	<10	15	0	61.8	>100%	>100%
Gully 2		<0.50	<10	10	0	69.0	>100%	>100%
Gully 3		<0.50	<10	11	0	72.3	>100%	>100%
Gully 3	Field Dup.	<0.50	<10	5	0	80.0	>100%	>100%
Gully 4		<0.50	<10	8	0	92.3	>100%	>100%
Gully 5		7.79	<10	7	0	23.5	45.30%	>100%

**Laboratory Analytical Data for Sediment
from "The Gully", June 2000**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1a: Trace Elements at Gully Stations - Spring 2000

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg
G1-D4		10000	<2	2	200	<5	<0.3	5	1	<2	2900
G2-D4		5200	<2	<2	96	<5	<0.3	2	<1	<2	790
G2-D4	Field Dup.	5700	<2	<2	100	<5	<0.3	2	<1	<2	1100
G3-D4		6100	<2	<2	120	<5	<0.3	2	<1	<2	1000
G4-D4		5600	<2	<2	110	<5	<0.3	2	<1	<2	620
G5-D4		5900	<2	<2	120	<5	<0.3	<2	<1	<2	490

Unique_station_id	Replicate_id	Lead mg/kg	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg
G1-D4		5.1	<5	56	<2	<0.01	<2	<2	48	0.1	<2
G2-D4		2.5	<5	7	2	<0.01	<2	<2	22	0.1	<2
G2-D4	Field Dup.	2.8	<5	10	<2	<0.01	<2	<2	25	0.1	<2
G3-D4		2.9	<5	15	<2	<0.01	<2	<2	26	0.1	<2
G4-D4		2.8	<5	10	<2	<0.01	<2	<2	25	0.1	<2
G5-D4		2.7	<5	9	<2	<0.01	<2	<2	26	0.1	<2

Unique_station_id	Replicate_id	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
G1-D4		0.2	8	8
G2-D4		0.1	3	3
G2-D4	Field Dup.	0.5	4	3
G3-D4		0.1	3	3
G4-D4		0.2	2	16
G5-D4		0.1	2	4

TABLE 2d: Petroleum Hydrocarbons at Gully Stations - Spring 2000

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₅ mg/kg	C ₁₆ -C ₂₀ mg/kg	TEH (C ₁₁ -C ₂₀) mg/kg	YFH mg/kg
Gully 1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 3	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
Gully 5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3

TABLE 3a: Polycyclic Aromatic Hydrocarbons at Gully Stations - Spring 2000

Unique_station_id	Replicate_id	Naphthalene mg/kg	Perylene mg/kg	2-Methylnaphthalene mg/kg	1-Methylnaphthalene mg/kg	Acenaphthylene mg/kg	Acenaphthene mg/kg
G1-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G2-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G2-D4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G3-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G4-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G5-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Fluorene mg/kg	Phenanthrene mg/kg	Anthracene mg/kg	Fluoranthene mg/kg	Pyrene mg/kg	Benzo(a)anthracene mg/kg
G1-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G2-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G2-D4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G3-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G4-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G5-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Chrysene mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)pyrene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenzo(a,h)anthracene mg/kg
G1-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G2-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G2-D4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G3-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G4-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
G5-D4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Unique_station_id	Replicate_id	Benzo(ghi)perylene mg/kg
G1-D4		< 0.05
G2-D4		< 0.05
G2-D4	Field Dup.	< 0.05
G3-D4		< 0.05
G4-D4		< 0.05
G5-D4		< 0.05

TABLE 4a: Sediment Quality at Gully Stations - Spring 2000

Unique_station_id	Replicate_id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
G1-D4		0.5	< 0.1	0.5	< 0.1	98.8	0.2	1	17	
G2-D4		0.4	< 0.1	0.4	0.7	98.4	0.1	0.8	16	
G2-D4	Field Dup.	0.4	0.1	0.3	0.6	98.5	0.1	0.8	16	
G3-D4		0.2	< 0.1	0.3	0.2	98.9	< 0.1	0.9	17	
G4-D4		0.3	< 0.1	0.3	0.2	98.8	0.1	0.9	18	
G5-D4		0.3	< 0.1	0.3	< 0.1	99	< 0.1	0.9	18	

TABLE 5a: Toxicity at Gully Stations - Spring 2000

Unique_station_id	Replicate_id	Amphipod Survival Mortality	Microtox EC50
G1-D4		5	> 98684mg/L
G2-D4		2	> 98684mg/L
G2-D4	Field Dup.	3	> 98684mg/L
G3-D4		4	> 98684mg/L
G4-D4		6	> 98684mg/L
G5-D4		4	> 98684mg/L

**Laboratory Analytical Data for Sediment
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- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at Gully Stations - Fall 2000

Unique station id	Replicate id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg
G1-D5		7700	< 2	2	150	< 5	< 0.3	4	< 1	< 2	1600
G2-D5		5200	< 2	< 2	120	< 5	< 0.3	2	< 1	< 2	1000
G3-D5		5800	< 2	< 2	110	< 5	< 0.3	2	< 1	< 2	940
G4-D5		7000	< 2	< 2	130	< 5	< 0.3	2	< 1	< 2	1000
G5-D5		4700	< 2	< 2	90	< 5	< 0.3	< 2	< 1	< 2	380
G5-D5	Lab Dup	4900	< 2	< 2	97	< 5	< 0.3	< 2	< 1	< 2	370

Unique station id	Replicate id	Lead mg/kg	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Tantalum mg/kg	Tin mg/kg
G1-D5		3.7	< 5	24	< 2	< 0.01	< 2	< 2	37	0.1	< 2
G2-D5		2.4	< 5	19	< 2	< 0.01	< 2	< 2	28	0.1	< 2
G3-D5		2.7	< 5	12	< 2	< 0.01	< 2	< 2	26	0.2	< 2
G4-D5		3	< 5	32	< 2	< 0.01	< 2	< 2	32	0.1	< 2
G5-D5		2.2	< 5	4	< 2	< 0.01	< 2	< 2	20	0.1	< 2
G5-D5	Lab Dup	2.1	< 5	5	< 2	< 0.01	< 2	< 2	24	0.1	< 2

Unique station id	Replicate id	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
G1-D5		0.2	6	5
G2-D5		0.2	4	6
G3-D5		0.2	4	4
G4-D5		0.1	4	3
G5-D5		0.1	2	2
G5-D5	Lab Dup	0.1	2	2

TABLE 2b: Petroleum Hydrocarbons at Gully Stations - Fall 2000

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₇ -C ₁₀ mg/kg	C ₁₁ -C ₁₄ mg/kg	C ₁₅ -C ₁₈ mg/kg	TEH (C ₁₁ -C ₁₈) mg/kg
G1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
G2-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
G3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
G4-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
G5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
G5-D5	Lab Dup	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Gully Stations - Fall 2000

Unique_station_id	Replicate_id	Naphthalene mg/kg	Perylene mg/kg	1-Methylnaphthalene mg/kg	1-Methylnaphthalene mg/kg	Acenaphthylene mg/kg	Acenaphthene mg/kg
G1-D5							
G2-D5							
G3-D5							
G4-D5							
G5-D5							
G5-D5	Lab Dup						

Unique_station_id	Replicate_id	Fluorene mg/kg	Phenanthrene mg/kg	Anthracene mg/kg	Fluoranthene mg/kg	Pyrene mg/kg	Benzo(a)anthracene mg/kg
G1-D5							
G2-D5							
G3-D5							
G4-D5							
G5-D5							
G5-D5	Lab Dup						

Unique_station_id	Replicate_id	Chrysene mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)pyrene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg
G1-D5							
G2-D5							
G3-D5							
G4-D5							
G5-D5							
G5-D5	Lab Dup						

Unique_station_id	Replicate_id	Benzo(ghi)perylene mg/kg
G1-D5		
G2-D5		
G3-D5		
G4-D5		
G5-D5		
G5-D5	Lab Dup	

TABLE 4b: Sediment Quality at Gully Stations - Fall 2000

Unique_station_id	Replicate_id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
G1-D5		0.6	0.5	0.1	0.2	98.9	< 0.1	1	15	69
G2-D5		0.4	0.4	< 0.1	1.6	97.6	0.1	0.7	17	55
G3-D5		0.2	0.2	< 0.1	0.3	99	< 0.1	0.8	16	35
G4-D5		0.2	0.2	< 0.1	< 0.1	99.3	< 0.1	0.7	16	44
G5-D5		0.3	0.3	< 0.1	< 0.1	99.2	< 0.1	0.8	17	45
G5-D5	Lab Dup	0.3	0.3	< 0.1	< 0.1	99.1	< 0.1	0.8	18	

TABLE 5b: Toxicity at Gully Stations - Fall 2000

Unique station Id	Replicate Id	Amphipod Survival Mortality	Microtox EC50
G1-D5		12	>98684
G2-D5		21	>98684
G3-D5		6	>98684
G4-D5		3	>98684
G5-D5		6	>98684
G5-D5	Lab Dup.		>98684

**Laboratory Analytical Data for Sediment
from “The Gully”, June 2001**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons

TABLE 1: Trace Elements at Gully Stations - Spring 2001

Unique_station_id	Sulfide	Barium	Ammonia
	mg/kg	mg/kg	mg/kg
G1		120	
G1-Lab Dup		140	
G2		100	
G3		97	
G3-Field dup		110	
G4		130	
G5		130	

TABLE 2: Petroleum Hydrocarbons at Gully Stations - Spring 2001

Unique_station_id	Benzene	Toluene	Ethylbenzene	Xylenes	C ₆ -C ₁₀	C ₁₁ -C ₁₅	C ₁₆ -C ₂₀	TEH (C ₁₁ -C ₂₁)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
G1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.384	<3.0
G1-Lab Dup	<0.250	<0.250	<0.250	<0.050	<2.5	<0.250	0.36	<3.0
G2	<0.250	<0.250	<0.250	<0.050	<2.5	<0.250	0.361	<3.0
G3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.427	<3.0
G3-Field dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.349	<3.0
G4	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.37	<3.0
G5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.446	<3.0

**Laboratory Analytical Data for Sediment
from “The Gully”, July 2002**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons

TABLE 1: Trace Elements at Gully Stations - Summer 2002

Unique_station_id	Sulfide	Barium	Ammonia
	mg/kg	mg/kg	mg/kg
G1	50	240	5.93
G2	55	110	11.3
G3	44	100	1.22
G4	49	140	5.43
G5	120	120	0.55
G5 Lab Dup.	120	110	0.3

TABLE 2: Petroleum Hydrocarbons at Gully Stations - Summer 2002

Unique_station_id	Benzene	Toluene	Ethylbenzene	Xylenes	C ₆ -C ₁₀	C ₁₁ -C ₂₀	C ₂₁ -C ₃₂	TEH (C ₁₁ -C ₃₂)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
G1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
G2	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
G3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
G4	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
G5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
G5 Lab Dup.	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	

**Laboratory Analytical Data for Sediment
from Venture Field, June 1998**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1a: Trace Elements at Venture Drill Site - June 1998

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
V-250-1		8940	<2	<2	150	<5	<5	<0.3	3	<1	<2	1800	3.60	<5
V-250-3		10400	<2	2	170	<5	<5	<0.3	4	1	<2	2200	4.10	<5
V-250-3	Lab Dup.	10300	<2	<2	170	<5	<5	<0.3	4	<1	<2	2500	4.40	<5
V-250-5		9240	<2	<2	160	<5	<5	<0.3	3	<1	<2	1800	3.70	<5
V-250-5	Field Dup.	8860	<2	2	170	<5	<5	<0.3	3	<1	<2	1700	3.80	<5
V-250-7		7960	<2	<2	140	<5	<5	<0.3	3	<1	<2	1400	3.30	<5
V-500-1		10800	<2	2	190	<5	<5	<0.3	6	1	<2	2700	4.40	<5
V-500-3		11800	<2	2	210	<5	<5	<0.3	4	1	<2	3000	5.70	<5
V-500-5		9760	<2	2	180	<5	<5	<0.3	5	1	<2	2100	4.30	<5
V-500-5	Field Dup.	10700	<2	2	180	<5	<5	<0.3	5	1	<2	2900	4.90	<5
V-500-7		12800	<2	3	190	<5	<5	<0.3	17	3	5	16200	11.00	<5
V-500-7	Lab Dup.	12200	<2	2	190	<5	<5	<0.3	17	3	4	14200	10.00	<5
V-1000-1		12200	<2	2	190	<5	<5	<0.3	8	1	2	6310	6.40	<5
V-1000-3		12400	<2	2	190	<5	<5	<0.3	7	1	<2	4100	5.70	<5
V-1000-5		10800	<2	2	170	<5	<5	<0.3	6	1	<2	3700	5.70	<5
V-1000-7		13300	<2	3	200	<5	<5	<0.3	28	3	4	18000	12.00	<5
V-3000-1		8630	<2	2	140	<5	<5	<0.3	4	1	<2	3100	4.10	<5
V-3000-2		9230	<2	<2	150	<5	<5	<0.3	3	<1	<2	1800	3.70	<5
V-3000-3		12800	<2	3	200	<5	<5	<0.3	13	2	2	10200	8.20	<5
V-3000-4		12600	<2	<2	220	<5	<5	<0.3	5	1	<2	2400	5.30	<5
V-3000-5		13900	<2	2	220	<5	<5	<0.3	9	1	2	6960	7.10	<5
V-3000-5	Lab Dup.	13400	<2	2	220	<5	<5	<0.3	10	2	2	7690	7.40	<5
V-3000-6		15100	<2	2	240	<5	<5	<0.3	16	2	2	11500	8.90	<5
V-3000-7		8990	<2	2	140	<5	<5	<0.3	5	1	<2	3100	4.60	<5
V-3000-8		8910	<2	<2	140	<5	<5	<0.3	4	1	<2	2100	3.70	<5
V-6000-3		6540	<2	<2	120	<5	<5	<0.3	2	<1	<2	1000	2.80	<5
V-6000-5		14000	<2	2	180	<5	<5	<0.3	16	2	2	9620	7.90	<5
V-6000-7		9130	<2	2	150	<5	<5	<0.3	5	1	<2	3300	4.00	<5
V-10000-1		11400	<2	2	180	<5	<5	<0.3	5	1	<2	2600	5.70	<5
V-10000-3		6830	<2	<2	120	<5	<5	<0.3	2	<1	<2	1100	3.10	<5
V-10000-5		15800	<2	2	240	<5	<5	<0.3	9	1	2	6880	7.80	<5
V-10000-7		12000	<2	2	190	<5	<5	<0.3	8	1	<2	4500	6.30	<5
V-15000-1		8660	<2	2	140	<5	<5	<0.3	5	1	<2	3000	6.80	<5
V-15000-2		12300	<2	3	180	<5	<5	<0.3	8	1	<2	4200	6.80	<5
V-15000-3		21100	<2	4	330	<5	<5	<0.3	12	1	2	8180	9.00	<5
V-15000-4		8750	<2	<2	140	<5	<5	<0.3	3	1	<2	1600	3.70	<5
V-15000-5		17900	<2	2	290	<5	<5	<0.3	9	1	2	4800	8.40	<5
V-15000-5		18000	<2	2	280	<5	<5	<0.3	8	1	2	4100	7.00	<5
V-15000-6		19400	<2	2	280	<5	<5	<0.3	15	2	3	10600	8.20	<5
V-15000-7		6240	<2	2	120	<5	<5	<0.3	2	<1	<2	2200	3.00	<5
V-15000-8		18000	<2	2	280	<5	<5	<0.3	8	1	2	4100	7	<5
V-20000-4		11200	<2	2	200	<5	<5	<0.3	3	<1	2	1800	4.60	<5

TABLE 1a: Trace Elements at Venture Drift Site - June 1998 (Continued)

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Thi mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
V-250-1		31	<2	<0.01	<2	<2	37	0.10	<2	0.20	4	6
V-250-3		44	<2	<0.01	<2	<2	45	0.10	<2	0.30	5	6
V-250-3	Lab Dup.	<2	<2	<0.01	<2	<2	43	0.10	<2	0.20	6	7
V-250-5		27	<2	<0.01	<2	<2	39	0.10	<2	0.20	5	8
V-250-5	Field Dup.	22	<2	<0.01	<2	<2	37	0.10	<2	0.20	5	8
V-250-7		19	<2	<0.01	<2	<2	31	0.10	<2	0.20	4	6
V-500-1		45	<2	<0.01	<2	<2	41	0.10	<2	0.20	7	8
V-500-3		79	<2	<0.01	<2	<2	48	0.10	<2	0.20	7	7
V-500-5		33	<2	<0.01	2.00	<2	43	0.10	<2	0.20	7	8
V-500-5	Field Dup.	55	<2	<0.01	<2	<2	43	0.10	<2	0.20	8	9
V-500-7		620	<2	<0.01	3.00	<2	52	0.10	<2	0.60	36	25
V-500-7	Lab Dup.	510	<2	<0.01	3.00	<2	52	0.10	<2	0.50	33	23
V-1000-1		160	<2	<0.01	2.00	<2	45	0.10	<2	0.30	14	10
V-1000-3		110	<2	<0.01	2.00	<2	50	0.10	<2	0.20	11	10
V-1000-5		120	<2	<0.01	<2	<2	42	0.10	<2	0.30	10	10
V-1000-7		630	<2	<0.01	3.00	<2	54	0.10	<2	0.60	40	32
V-3000-1		71	<2	<0.01	<2	<2	36	0.10	<2	0.20	7	7
V-3000-2		24	<2	<0.01	<2	<2	33	0.10	<2	0.20	4	5
V-3000-3		310	<2	<0.01	3.00	<2	54	0.10	<2	0.40	24	17
V-3000-4		48	<2	<0.01	<2	<2	53	0.10	<2	0.20	6	7
V-3000-5		220	<2	0.01	2.00	<2	58	0.10	<2	0.40	14	12
V-3000-5	Lab Dup.	240	<2	<0.01	2.00	<2	57	0.10	<2	0.30	16	14
V-3000-6		350	<2	0.02	3.00	<2	60	0.10	<2	0.50	26	19
V-3000-7		55	<2	<0.01	<2	<2	37	0.10	<2	0.20	8	7
V-3000-8		55	<2	<0.01	<2	<2	37	0.10	<2	0.20	5	7
V-6000-3		15	<2	<0.01	<2	<2	23	0.10	<2	0.10	3	5
V-6000-5		300	<2	<0.01	3.00	<2	56	0.10	<2	0.40	21	16
V-6000-7		69	<2	0.01	<2	<2	40	0.10	<2	0.20	7	7
V-10000-1		53	<2	<0.01	<2	<2	47	0.10	<2	0.30	7	7
V-10000-3		19	<2	<0.01	<2	<2	27	0.10	<2	0.20	3	4
V-10000-5		200	<2	0.01	2.00	<2	60	0.20	<2	0.30	15	12
V-10000-7		100	<2	<0.01	2.00	<2	50	0.10	<2	0.30	11	10
V-15000-1		70	<2	<0.01	<2	<2	38	0.10	<2	0.30	9	7
V-15000-2		74	<2	<0.01	2.00	<2	47	0.10	<2	0.30	11	8
V-15000-3		140	<2	<0.01	3.00	<2	78	0.20	<2	0.40	16	12
V-15000-4		30	<2	0.01	<2	<2	37	0.10	<2	<2	5	6
V-15000-5		150	<2	<0.01	2.00	<2	72	0.20	<2	0.30	12	11
V-15000-5		88	3.00	<0.01	2.00	<2	71	0.20	<2	0.30	10	9
V-15000-6		340	<2	<0.01	3.00	<2	73	0.20	<2	0.50	23	19
V-15000-7		13	<2	0.01	<2	<2	27	0.10	<2	0.10	5	11
V-15000-8		88	3	<0.01	2	<2	71	0.2	<2	0.3	10	9
V-20000-4		19	<2	0.01	<2	<2	47	0.10	<2	0.10	4	11

TABLE 3a: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - June 1998 (Continued)

Unique_station_id	Replicate_id	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
V-250-1		<0.05	<0.05	<0.05	<0.05
V-250-3		<0.05	<0.05	<0.05	<0.05
V-250-3	Lab Dup.	<0.05	<0.05	<0.05	<0.05
V-250-5		<0.05	<0.05	<0.05	<0.05
V-250-5	Field Dup.	<0.05	<0.05	<0.05	<0.05
V-250-7		<0.05	<0.05	<0.05	<0.05
V-500-1		<0.05	<0.05	<0.05	<0.05
V-500-3		<0.05	<0.05	<0.05	<0.05
V-500-5		<0.05	<0.05	<0.05	<0.05
V-500-5	Field Dup.	<0.05	<0.05	<0.05	<0.05
V-500-7		<0.05	<0.05	<0.05	<0.05
V-500-7	Lab Dup.	<0.05	<0.05	<0.05	<0.05
V-1000-1		<0.05	<0.05	<0.05	<0.05
V-1000-3		<0.05	<0.05	<0.05	<0.05
V-1000-5		<0.05	<0.05	<0.05	<0.05
V-1000-7		<0.05	<0.05	<0.05	<0.05
V-3000-1		<0.05	<0.05	<0.05	<0.05
V-3000-2		<0.05	<0.05	<0.05	<0.05
V-3000-3		<0.05	<0.05	<0.05	<0.05
V-3000-4		<0.05	<0.05	<0.05	<0.05
V-3000-5		<0.05	<0.05	<0.05	<0.05
V-3000-5	Lab Dup.	<0.05	<0.05	<0.05	<0.05
V-3000-6		<0.05	<0.05	<0.05	<0.05
V-3000-7		<0.05	<0.05	<0.05	<0.05
V-3000-8		<0.05	<0.05	<0.05	<0.05
V-6000-3		<0.05	<0.05	<0.05	<0.05
V-6000-5		<0.05	<0.05	<0.05	<0.05
V-6000-7		<0.05	<0.05	<0.05	<0.05
V-10000-1		<0.05	<0.05	<0.05	<0.05
V-10000-3		<0.05	<0.05	<0.05	<0.05
V-10000-5		<0.05	<0.05	<0.05	<0.05
V-10000-7		<0.05	<0.05	<0.05	<0.05
V-15000-1		<0.05	<0.05	<0.05	<0.05
V-15000-2		<0.05	<0.05	<0.05	<0.05
V-15000-3		<0.05	<0.05	<0.05	<0.05
V-15000-4		<0.05	<0.05	<0.05	<0.05
V-15000-5		<0.05	<0.05	<0.05	<0.05
V-15000-5		<0.05	<0.05	<0.05	<0.05
V-15000-6		<0.05	<0.05	<0.05	<0.05
V-15000-7		<0.05	<0.05	<0.05	<0.05
V-15000-8		<0.05	<0.05	<0.05	<0.05
V-20000-4		<0.05	<0.05	<0.05	<0.05

TABLE 4a: Sediment Quality at Venture Drill Site - June 1998

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
V-250-1		<0.10	0.20	<0.1	99.2	<0.1	0.9	0.0002	<0.3
V-250-3		<0.10	0.20	<0.1	99.1	<0.1	1	0.0003	<0.3
V-250-3	Lab Dup.	<0.10	0.20	0.1	99	<0.1	0.9		
V-250-3		<0.10	0.20	<0.1	99.1	<0.1	0.8	0.0019	1.10
V-250-5	Field Dup.	0.10	0.20	<0.1	99.3	<0.1	0.9		
V-250-7		0.10	0.20	<0.1	99.1	0.1	0.8	0.0022	<0.3
V-300-1		<0.10	0.20	2.6	97	0.1	0.4	0.0004	<0.3
V-300-3		0.10	0.30	0.1	99.1	<0.1	0.8	lost	<0.3
V-300-3		0.10	0.20	<0.1	99.1	<0.1	1	0.0018	<0.3
V-300-3	Field Dup.	0.10	0.20	<0.1	99.2	<0.1	0.8		
V-300-7		0.10	0.20	<0.1	99.3	<0.1	0.8	0.0017	<0.3
V-300-7	Lab Dup.	0.10	0.20	<0.1	99.2	1.6	0.8		
V-1000-1		<0.10	0.20	<0.1	99.2	<0.1	1	0.0002	<0.3
V-1000-3		<0.10	0.20	<0.1	99.1	0.1	0.8	0.0005	0.28
V-1000-5		<0.10	0.30	<0.1	99.2	<0.1	0.8	0.0003	1.00
V-1000-7		<0.10	0.30	<0.1	99	0.1	0.9	0.0007	0.56
V-3000-1		<0.10	0.20	0.1	98.9	<0.1	0.9	0.0001	<0.3
V-3000-2		<0.10	0.20	<0.1	99.2	<0.1	0.8	0.0004	<0.3
V-3000-3		<0.10	0.30	4.1	94.4	0.3	1.2	0.0004	0.24
V-3000-4		<0.10	0.30	<0.1	99.1	<0.1	0.9	0.0003	<0.3
V-3000-5		0.10	0.30	<0.1	99.2	<0.1	0.8	0.0002	<0.3
V-3000-5	Lab Dup.	0.10	0.30	<0.1	99.1	<0.1	0.9		
V-3000-6		0.10	0.30	<0.1	99	1.6	1	0.0006	<0.3
V-3000-7		<0.10	0.20	<0.1	99.2	0.1	0.8	0.0016	<0.3
V-3000-8		<0.10	0.20	<0.1	99.1	<0.1	0.9	0.0002	0.80
V-6000-3		<0.10	0.20	<0.1	99.1	<0.1	0.9	0.0008	<0.3
V-6000-5		<0.10	0.30	<0.1	99.6	<0.1	0.4	0.0004	<0.3
V-6000-7		<0.10	0.20	<0.1	99.2	<0.1	0.8	0.0004	<0.3
V-10000-1		<0.10	0.30	<0.1	99.1	0.1	0.8	0.0003	<0.3
V-10000-3		0.10	0.20	0.3	98.4	0.1	1.1	0.0004	<0.3
V-10000-5		0.10	0.30	<0.1	99	<0.1	1	0.0003	<0.3
V-10000-7		0.10	0.30	<0.1	99	<0.1	1	0.0001	0.35
V-15000-1		0.20	0.50	7	91.6	0.3	1.2	0.0026	<0.3
V-15000-2		0.30	0.40	<0.1	99.2	<0.1	0.8	0.0007	<0.3
V-15000-3		0.20	0.90	<0.1	97.7	0.5	1.8	0.001	<0.3
V-15000-4		<0.10	0.30	<0.1	99.2	1.5	0.8	0.0001	<0.3
V-15000-5		0.10	0.40	0.1	97.4	0.5	2	0.0003	<0.3
V-15000-5		0.50	0.90	<0.1	99	1.7	1		
V-15000-6		0.30	0.50	5.8	92.9	0.1	1.2	0.0006	1.51
V-15000-7		0.10	0.20	<0.1	99.1	<0.1	0.9	0.0001	0.56
V-15000-8		0.30	0.90	0.1	97.4	0.5	2	0.0038	1.42
V-20000-4		0.10	0.40	<0.1	99	<0.1	1	0.0004	<0.3

TABLE 5a: Toxicity at Venture Drill Site - June 1998

Unique station_id	Replicate_id	Amphipod Mortality %	Survival Control Mortality %	Echinoid Fertilization % Fertilization	Microtox EC50
V-250-1		2	1	84	>100%
V-250-3		5	1	60	>100%
V-250-3	Lab Dup.				
V-250-5		4	2	90	>100%
V-250-5	Field Dup.				
V-250-7		0	2	95.3	>100%
V-500-1					
V-500-3					
V-500-5					
V-500-5	Field Dup.				
V-500-7					
V-500-7	Lab Dup.				
V-1000-1					
V-1000-3					
V-1000-5					
V-1000-7					
V-3000-1		8	1	82.3	>100%
V-3000-2					
V-3000-3		8	1	62.5	>100%
V-3000-4					
V-3000-5		3	1	40.8	>100%
V-3000-5	Lab Dup.				
V-3000-6					>100%
V-3000-7					
V-3000-8					
V-6000-3					
V-6000-5					
V-6000-7					
V-10000-1					
V-10000-3					
V-10000-5					
V-10000-7					
V-15000-1					
V-15000-2					
V-15000-3					
V-15000-4					
V-15000-5					
V-15000-5					
V-15000-6					
V-15000-7					
V-15000-8					
V-20000-4		5	1	0.75	>100%

**Laboratory Analytical Data for Sediment
from Venture Field, November 1998**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at Venture Drill Site - November 1998

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Artenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
V-250-1		9800	< 2	2	220	< 5	< 5	< 0.3	5	1	< 2	2800	4.3	< 5
V-250-3		11000	< 2	2	220	< 5	< 5	< 0.3	5	1	< 2	3200	4.8	< 5
V-250-5		9900	< 2	2	190	< 5	< 5	< 0.3	4	1	< 2	2200	4.4	< 5
V-250-7		8600	< 2	2	280	< 5	< 5	< 0.3	4	1	< 2	2600	4	< 5
V-500-1		7900	< 2	2	140	< 5	< 5	< 0.3	3	1	< 2	2100	3.6	< 5
V-500-3		12000	< 2	2	220	< 5	< 5	< 0.3	6	1	< 2	3200	5.2	< 5
V-500-5		10000	< 2	2	190	< 5	< 5	< 0.3	5	1	< 2	2900	4.7	< 5
V-500-5	Lab Dup.													
V-500-7		8200	< 2	2	150	< 5	< 5	< 0.3	8	1	< 2	6400	4.8	< 5
V-1000-1		12900	< 2	2	180	< 5	< 5	< 0.3	17	2	3	12000	9.5	< 5
V-1000-3		12700	< 2	2	190	< 5	< 5	< 0.3	10	2	2	7130	7.1	< 5
V-1000-3	Field Dup.													
V-1000-5		14000	< 2	2	220	< 5	< 5	< 0.3	9	1	2	5000	6.2	< 5
V-1000-5	Field Dup.	13000	< 2	2	210	< 5	< 5	< 0.3	9	1	< 2	5200	6.2	< 5
V-1000-7		13900	< 2	2	210	< 5	< 5	< 0.3	11	2	2	8090	8.4	< 5
V-3000-1		8300	< 2	< 2	130	< 5	< 5	< 0.3	4	1	< 2	2200	3.5	< 5
V-3000-2		10000	< 2	2	180	< 5	< 5	< 0.3	4	1	< 2	2100	4.1	< 5
V-3000-2	Lab Dup.	9800	< 2	2	170	< 5	< 5	< 0.3	4	1	< 2	2600	4	< 5
V-3000-3		12000	< 2	2	170	< 5	< 5	< 0.3	10	2	2	7400	6.3	< 5
V-3000-3	Lab Dup.													
V-3000-4		12400	< 2	2	170	< 5	< 5	< 0.3	12	2	2	7830	7.8	< 5
V-3000-5		13000	< 2	2	230	< 5	< 5	< 0.3	7	1	< 2	3400	5.4	< 5
V-3000-6		12900	< 2	3	180	< 5	< 5	< 0.3	28	3	4	13700	13	< 5
V-3000-6	Field Dup.	14600	< 2	3	220	< 5	< 5	< 0.3	22	3	3	12700	11	< 5
V-3000-7		7330	< 2	2	100	< 5	< 5	< 0.3	4	1	< 2	2600	3.4	< 5
V-3000-7	Field Dup.	8120	< 2	< 2	130	< 5	< 5	< 0.3	4	1	< 2	2700	3.8	< 5
V-3000-8		9600	< 2	2	160	< 5	< 5	< 0.3	6	1	2	4300	4.7	< 5
V-3000-8		9800	< 2	2	180	< 5	< 5	< 0.3	8	1	< 2	4700	4.7	< 5
V-6000-3		6090	< 2	< 2	100	< 5	< 5	< 0.3	2	< 1	< 2	944	2.4	< 5
V-6000-5		13000	< 2	3	220	< 5	< 5	< 0.3	11	2	2	6500	6.4	< 5
V-6000-7		11100	< 2	2	160	< 5	< 5	< 0.3	9	1	< 2	6890	6.5	< 5
V-6000-7	Lab Dup.													
V-10000-1		9600	< 2	2	180	< 5	< 5	< 0.3	5	1	< 2	2100	4.9	< 5
V-10000-3		6050	< 2	< 2	95	< 5	< 5	< 0.3	2	< 1	< 2	898	2.5	< 5
V-10000-3	Lab Dup.	7820	< 2	< 2	120	< 5	< 5	< 0.3	2	< 1	< 2	1310	3.3	< 5
V-10000-5		15900	< 2	2	230	< 5	< 5	< 0.3	13	2	2	9690	9	< 5
V-10000-7		12000	< 2	3	160	< 5	< 5	< 0.3	25	3	4	15500	12	< 5
V-15000-1		8100	< 2	2	130	< 5	< 5	< 0.3	4	< 1	< 2	2300	5.5	< 5
V-15000-2		13000	< 2	4	230	< 5	< 5	< 0.3	9	1	2	4300	7.4	< 5
V-15000-2	Lab Dup.	14000	3	5	230	< 5	< 5	< 0.3	9	1	2	5400	7.9	< 5
V-15000-3		21000	< 2	4	340	< 5	< 5	< 0.3	14	2	2	7800	8.5	< 5
V-15000-3	Lab Dup.	21000	< 2	4	360	< 5	< 5	< 0.3	13	1	2	7200	8.8	< 5
V-15000-4		10100	< 2	< 2	170	< 5	< 5	< 0.3	3	1	< 2	2100	4.3	< 5
V-15000-4	Field Dup.	9740	< 2	2	150	< 5	< 5	< 0.3	3	1	< 2	2100	4.3	< 5
V-15000-5		18100	< 2	2	260	< 5	< 5	< 0.3	9	1	3	5910	7.5	< 5
V-15000-6		19500	< 2	2	270	< 5	< 5	< 0.3	14	2	3	9210	8.8	< 5
V-15000-7		5890	< 2	2	95	< 5	< 5	< 0.3	4	< 1	< 2	3200	2.6	< 5
V-15000-7	Lab Dup.	6200	< 2	< 2	96	< 5	< 5	< 0.3	4	< 1	< 2	2400	2.7	< 5
V-15000-8		13000	< 2	2	230	< 5	< 5	< 0.3	8	1	2	3400	6.1	< 5
V-20000-4		11700	< 2	2	120	< 5	< 5	< 0.3	5	1	2	2100	4.9	< 5

TABLE 1b: Trace Elements at Venture Drill Site - November 1998(Continued)

Unique station id	Replicate id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	TiO mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
V-250-1		55	<2	<0.01	<2	<2	42	0.1	<2	0.2	7	7
V-250-3		67	<2	<0.01	<2	<2	48	0.1	<2	0.2	8	8
V-250-5		34	<2	<0.01	<2	<2	41	0.1	<2	0.2	6	7
V-250-7		72	<2	<0.01	<2	<2	38	0.1	<2	0.3	6	7
V-500-1		40	<2	0.02	<2	<2	33	0.1	<2	0.2	6	6
V-500-3		69	<2	<0.01	2	<2	48	0.2	<2	0.3	9	7
V-500-5		72	<2	0.05	<2	<2	43	0.1	<2	0.2	7	8
V-500-5	Lab Dup.											
V-500-7		170	<2	<0.01	<2	<2	34	0.1	<2	0.3	14	12
V-1000-1		430	<2	<0.01	3	<2	54	0.1	<2	0.5	28	23
V-1000-3		210	<2	<0.01	2	<2	54	0.1	<2	0.4	18	16
V-1000-3	Field Dup.											
V-1000-5		100	<2	<0.01	2	<2	56	0.1	<2	0.3	12	10
V-1000-5	Field Dup.	150	<2	<0.01	2	<2	52	0.1	<2	0.3	13	11
V-1000-7		250	<2	<0.01	2	<2	57	0.1	<2	0.4	20	17
V-3000-1		43	<2	<0.01	<2	<2	35	0.1	<2	0.2	6	7
V-3000-2		32	<2	<0.01	<2	<2	41	0.1	<2	0.2	6	6
V-3000-2	Lab Dup.	53	<2	<0.01	<2	<2	43	0.1	<2	0.2	7	7
V-3000-3		230	<2	<0.01	2	<2	48	0.1	<2	0.3	17	15
V-3000-3	Lab Dup.											
V-3000-4		290	<2	<0.01	2	<2	50	0.1	<2	0.4	19	18
V-3000-5		88	<2	<0.01	2	<2	54	0.1	<2	0.2	10	9
V-3000-6		560	<2	<0.01	3	<2	54	0.1	<2	0.7	32	28
V-3000-6	Field Dup.	430	<2	<0.01	3	<2	58	0.1	<2	0.6	27	24
V-3000-7		48	<2	<0.01	2	<2	31	0.1	<2	0.2	7	9
V-3000-7	Field Dup.	65	<2	<0.01	<2	<2	33	0.1	<2	0.2	7	9
V-3000-8		130	<2	<0.01	<2	<2	36	0.1	<2	0.2	11	10
V-3000-8		130	<2	<0.01	2	<2	40	0.1	<2	0.2	12	10
V-6000-3		8	<2	<0.01	<2	<2	25	0.1	<2	0.1	3	6
V-6000-5		200	<2	<0.01	2	<2	56	0.1	<2	0.3	16	17
V-6000-7		180	<2	<0.01	2	<2	49	0.1	<2	0.3	15	14
V-6000-7	Lab Dup.											
V-10000-1		43	<2	<0.01	<2	<2	40	0.1	<2	0.2	6	7
V-10000-3		11	<2	<0.01	<2	<2	27	0.1	<2	0.1	3	7
V-10000-3	Lab Dup.	20	<2	<0.01	<2	<2	37	0.1	<2	0.2	4	8
V-10000-5		320	<2	<0.01	3	<2	62	0.2	<2	0.5	24	22
V-10000-7		540	<2	<0.01	3	<2	52	0.1	<2	0.7	35	29
V-15000-1		44	<2	0.05	<2	<2	39	0.1	<2	0.2	8	7
V-15000-2		55	<2	<0.01	2	<2	55	0.1	<2	0.3	13	9
V-15000-2	Lab Dup.	66	2	<0.01	2	3	55	0.2	<2	0.4	13	10
V-15000-3		92	<2	<0.01	3	<2	74	0.2	<2	0.4	17	12
V-15000-3	Lab Dup.	92	<2	<0.01	3	<2	78	0.2	<2	0.4	16	11
V-15000-4		43	<2	<0.01	<2	<2	45	0.1	<2	0.2	5	10
V-15000-4	Field Dup.	41	<2	<0.01	<2	<2	42	0.1	<2	0.2	5	10
V-15000-5		170	<2	<0.01	2	<2	70	0.2	<2	0.3	14	15
V-15000-6		300	<2	<0.01	3	<2	77	0.2	<2	0.6	22	20
V-15000-7		18	<2	<0.01	<2	<2	26	0.1	<2	0.1	7	8
V-15000-7	Lab Dup.	26	<2	<0.01	<2	<2	26	0.1	<2	0.1	5	9
V-15000-8		84	<2	<0.01	2	<2	54	0.2	<2	0.4	10	9

TABLE 2b: Petroleum Hydrocarbons at Venture Drill Site - November 1998

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₂₀ mg/kg	C ₂₁ -C ₃₀ mg/kg	TEH (C ₁₁ -C ₃₀) mg/kg	TPH mg/kg
V-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	75.2	< 15	75.2	75.2
V-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-500-5	Lab Dup.									
V-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.714	< 0.25	102	0.71
V-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1	< 0.25	94	1.00
V-1000-3	Field Dup.									
V-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-1000-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.894	0.409	100	1.30
V-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-3000-2	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 2	< 3	105	0.00
V-3000-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 1.5	< 2	114	0.00
V-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.359	1.44	86	1.80
V-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.382	1.37	99	1.75
V-3000-6	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	81	0.00
V-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 1.5	< 2.5	118	0.00
V-3000-7	Field Dup.	< 0.025	0.049	< 0.025	0.1	< 2.5	0.392	1.42	79	1.81
V-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-3000-8	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-6000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.905	3.05	91	3.96
V-6000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-6000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.4	< 1.5	114	0.00
V-6000-7	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.6	< 1.5	125	0.00
V-10000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-10000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.01	2.6	97	3.61
V-10000-3	Lab Dup.									
V-10000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.622	0.647	102	1.27
V-10000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.437	1.04	103	1.48
V-15000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-15000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-15000-2	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-15000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-15000-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-15000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.386	0.821	93	0.00
V-15000-4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.11	1.51	98	2.62
V-15000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.19	1.5	136	2.69
V-15000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.53	4.09	135	5.62
V-15000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.44	1.73	120	2.17
V-15000-7	Lab Dup.									
V-20000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 15	< 15	< 30	< 32.5
V-20000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.41	5.11	100	2.45

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - November 1998 (Continued)

Unique station id	Replicate id	Fluoranthene mg/kg	Pyrene mg/kg	Benzo(a)anthracene mg/kg	Chrysene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)fluoranthene mg/kg	Benzo(a)pyrene mg/kg
V-250-1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-7		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-5	Lab Dup.							
V-500-7		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-3	Field Dup.							
V-1000-5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-5	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-7		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-2	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3	Lab Dup.							
V-3000-4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-6		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-6	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-7		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-7	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-8		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-8	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-6000-3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-6000-5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-6000-7		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-6000-7	Lab Dup.							
V-10000-1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-10000-3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-10000-3	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-10000-5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-10000-7		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-2		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-2	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-3		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-3	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-4		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-6		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-7		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-7	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-8		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-20000-1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - November 1998 (Continued)

Unique_station_id	Replicate_id	Pyrene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenzo(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
V-250-1		< 0.05	< 0.05	< 0.05	< 0.05
V-250-3		< 0.05	< 0.05	< 0.05	< 0.05
V-250-5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-7		< 0.05	< 0.05	< 0.05	< 0.05
V-500-1		< 0.05	< 0.05	< 0.05	< 0.05
V-500-3		< 0.05	< 0.05	< 0.05	< 0.05
V-500-5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-5	Lab Dup.				
V-500-7		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-3	Field Dup.				
V-1000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-5	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-2		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-2	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3	Lab Dup.				
V-3000-4		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-6		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-6	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-7	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-8		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-8	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-6000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-7	Lab Dup.				
V-10000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-3	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-10000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-2		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-2	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-3	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-4		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-6		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-7	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-8		< 0.05	< 0.05	< 0.05	< 0.05
V-20000-4		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4b: Sediment Quality at Venture Drill Site - November 1998

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
V-250-1		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0003	<0.30
V-250-3		0.1	0.2	< 0.1	99.1	< 0.1	0.8	0.0003	0.30
V-250-5		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0006	<0.30
V-250-7		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0003	<0.30
V-500-1		< 0.1	0.2	< 0.1	99.2	< 0.1	0.7	0.0004	<0.30
V-500-3		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0005	<0.30
V-500-5		0.1	0.2	< 0.1	98.9	< 0.1	1	0.0005	<0.30
V-500-5	Lab Dup.								
V-500-7		< 0.1	0.2	0.1	99.2	< 0.1	0.7	0.0005	<0.30
V-1000-1		0.1	0.2	< 0.1	99	0.1	0.9	0.0009	0.85
V-1000-3		0.1	0.2	< 0.1	99.1	< 0.1	0.9	0.0001	0.53
V-1000-3	Field Dup.							0.0013	0.88
V-1000-5		0.1	0.2	< 0.1	99	< 0.1	0.9	0.0003	<0.30
V-1000-5	Field Dup.	< 0.1	0.2	< 0.1	99.2	< 0.1	0.7	0.0002	<0.30
V-1000-7		0.1	0.2	< 0.1	99.1	< 0.1	0.8	0.0003	0.45
V-3000-1		< 0.1	0.2	< 0.1	99.2	< 0.1	0.7	0.0007	0.35
V-3000-2		< 0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0005	<0.30
V-3000-2	Lab Dup.	< 0.1	0.2	< 0.1	99.2	< 0.1	0.8		
V-3000-3		< 0.1	0.4	< 0.1	99.2	< 0.1	0.9	0.0002	<0.30
V-3000-3	Lab Dup.								
V-3000-4		0.4	0.2	< 0.1	99.2	0.1	0.8	0.0004	0.33
V-3000-5		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0001	<0.30
V-3000-6		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0002	<0.30
V-3000-6	Field Dup.	0.2	0.2	< 0.1	99.2	< 0.1	0.8	0.0007	0.53
V-3000-7		0.1	0.2	< 0.1	99.3	< 0.1	0.7	0.0004	0.78
V-3000-7	Field Dup.	0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0010	0.65
V-3000-8		< 0.1	0.2	< 0.1	99.2	< 0.1	0.7	0.0004	<0.30
V-3000-8	Field Dup.	< 0.1	0.2	< 0.1	99.2	0.1	0.7	0.0003	<0.30
V-6000-3		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0009	0.95
V-6000-5		< 0.1	0.3	< 0.1	99.2	< 0.1	0.8	0.0006	0.35
V-6000-7		0.1	0.2	< 0.1	99.2	3	0.8	0.0005	0.45
V-6000-7	Lab Dup.								
V-10000-1		0.3	0.4	0.6	98.2	0.2	1	0.0003	0.40
V-10000-3		0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0002	0.85
V-10000-3	Lab Dup.			< 0.1	99.3	0.1	0.7		
V-10000-5		< 0.1	0.4	< 0.1	99	< 0.1	1	0.0008	1.18
V-10000-7		< 0.1	0.3	< 0.1	99	0.1	0.8	0.0018	0.63
V-15000-1		0.1	0.3	4.5	93.9	0.5	1.1	0.0006	<0.30
V-15000-2		0.2	0.6	1.6	97.2	0.2	0.9	0.0012	<0.30
V-15000-2	Lab Dup.			1.4	97.6	0.1	0.9		
V-15000-3		0.3	0.9	< 0.1	97.6	0.8	1.6	0.0004	<0.30
V-15000-3	Lab Dup.			< 0.1	97.7	0.8	1.5		
V-15000-4		0.2	0.2	< 0.1	99.1	< 0.1	0.9	0.0006	0.80
V-15000-4	Field Dup.	0.1	0.2	< 0.1	99.2	< 0.1	0.8	0.0005	0.38
V-15000-5		0.2	0.4	< 0.1	99.1	< 0.1	0.9	0.0006	0.33
V-15000-6		0.1	0.7	0.4	98.4	0.2	1	0.0006	0.65
V-15000-7		0.1	0.2	< 0.1	99.2	0.1	0.7	0.0002	0.35
V-15000-7	Lab Dup.			0.1	99.2	< 0.1	0.7		
V-15000-8		0.5	1.4	< 0.1	96.8	1.2	1.9	0.0003	<0.30
V-20000-4		0.2	0.2	< 0.1	99.2	< 0.1	0.9	0.0023	0.93

TABLE 5b: Toxicity at Venture Drill Site - November 1998

Unique station id	Replicate id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echinoid Fertilization		Microtox EC50
				Mortality %	Control Mortality %	% Fertilization	IC 50	
V-250-1				11	2	97.00		>100%
V-250-3				7	2	77.30	91.1	>100%
V-250-5								>100%
V-250-7				11	2	59.30	>100%	>100%
V-500-1				13	2	82.70		>100%
V-500-3				1	2	2.30	22.6	>100%
V-500-5				3	2	84.30		>100%
V-500-7	Lab Dup.							
V-500-7				13	2	62.70	68.2	>100%
V-1000-1								
V-1000-3								
V-1000-3	Field Dup.							
V-1000-5								
V-1000-5	Field Dup.							
V-1000-7								
V-3000-1				17	2	92.70		>100%
V-3000-2								
V-3000-2	Lab Dup.							
V-3000-3		<0.05	<0.05	4	2	88.00		>100%
V-3000-3	Lab Dup.							
V-3000-4								
V-3000-5				1	2	96.30		>100%
V-3000-6								
V-3000-6	Field Dup.							
V-3000-7		<0.05	<0.05	4	2	87.70		>100%
V-3000-7	Field Dup.	<0.05	<0.05	5	2	90.00		>100%
V-3000-8								
V-3000-8	Field Dup.							
V-6000-3								
V-6000-5								
V-6000-7								
V-6000-7	Lab Dup.							
V-10000-1								
V-10000-3								
V-10000-3	Lab Dup.							
V-10000-5								
V-10000-7								
V-15000-1								
V-15000-2								
V-15000-2	Lab Dup.							
V-15000-3								
V-15000-3	Lab Dup.							
V-15000-4								
V-15000-4	Field Dup.							
V-15000-5								
V-15000-6								
V-15000-7								
V-15000-7	Lab Dup.							
V-15000-8								
V-20000-4		<0.05	<0.05	26	2	71.00	62.0	>100%

**Laboratory Analytical Data for Sediment
from Venture Field, June 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1c: Trace Elements at Venture Drill Site - June 1999

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
V-250-1		8100	<2	2	170	<5	<5	<0.3	5	1	<2	3000	4	<5
V-250-1	Lab Dup.	8800	<2	2	170	<5	<5	<0.3	4	<1	<2	2600	4	<5
V-250-3		8700	<2	2	240	<5	<5	<0.3	4	1	<2	2300	3.9	<5
V-250-7		6700	<2	2	200	<5	<5	<0.3	4	1	<2	1900	3.4	<5
V-500-1		7900	<2	2	170	<5	<5	<0.3	4	1	4	1900	3.8	<5
V-500-3		11000	<2	2	240	<5	<5	<0.3	6	1	<2	3100	5	<5
V-500-5		8700	<2	2	180	<5	<5	<0.3	5	1	<2	2400	4.2	<5
V-500-7		12000	<2	3	220	<5	<5	<0.3	18	3	4	13000	8.6	<5
V-1000-1		12000	<2	2	210	<5	<5	<0.3	11	2	2	7900	6.6	<5
V-1000-3		9500	<2	2	200	<5	<5	<0.3	5	1	<2	2600	4.4	<5
V-1000-5		9800	<2	2	210	<5	<5	<0.3	5	1	<2	2300	4.6	<5
V-1000-7		11000	<2	2	210	<5	<5	<0.3	8	1	2	6000	6.2	<5
V-3000-1		8600	<2	2	150	<5	<5	<0.3	4	1	<2	2100	3.4	<5
V-3000-2		8600	<2	<2	160	<5	<5	<0.3	3	<1	<2	1600	3.5	<5
V-3000-3		13000	<2	2	210	<5	<5	<0.3	11	2	2	7600	6.7	<5
V-3000-4		13000	<2	2	210	<5	<5	<0.3	8	1	<2	4100	5.3	<5
V-3000-5		13000	<2	3	200	<5	<5	<0.3	15	2	3	9600	8.2	<5
V-3000-5	Lab Dup.	13000	<2	2	220	<5	<5	<0.3	13	2	3	7900	7	<5
V-3000-5	Field Dup.	13000	<2	3	230	<5	<5	<0.3	19	2	2	7600	8.4	<5
V-3000-6		13000	<2	2	210	<5	<5	<0.3	11	2	2	7400	7.1	<5
V-3000-7		8200	<2	2	140	<5	<5	<0.3	4	<1	<2	2200	3.3	<5
V-3000-8		8700	<2	2	160	<5	<5	<0.3	5	1	2	2800	4	<5
V-6000-3		6000	<2	<2	84	<5	<5	<0.3	2	<1	<2	1500	2.4	<5
V-6000-5		14000	<2	2	220	<5	<5	<0.3	12	2	2	7200	7	<5
V-6000-7		8400	<2	2	140	<5	<5	<0.3	8	1	2	5800	4.5	<5
V-10000-1		9400	<2	2	160	<5	<5	<0.3	5	1	<2	2700	4.5	<5
V-10000-3		7400	<2	<2	130	<5	<5	<0.3	2	<1	<2	1000	2.9	<5
V-10000-5		15000	<2	2	260	<5	<5	<0.3	12	2	2	7600	7.4	<5
V-10000-7		13000	<2	2	200	<5	<5	<0.3	11	1	2	5900	5.4	<5
V-10000-7	Field Dup.	13000	<2	2	230	<5	<5	<0.3	22	2	2	10000	8.3	<5
V-15000-1		8100	<2	3	150	<5	<5	<0.3	4	<1	<2	2400	5.1	<5
V-15000-2		10000	<2	4	170	<5	<5	<0.3	7	1	<2	3900	5.6	<5
V-15000-2	Field Dup.	10000	<2	4	190	<5	<5	<0.3	7	1	<2	3800	6.1	<5
V-15000-3		21000	<2	5	360	<5	<5	<0.3	14	2	2	7800	8.9	5
V-15000-4		9400	<2	2	170	<5	<5	<0.3	2	<1	<2	1400	4.1	<5
V-15000-5		17000	<2	2	310	<5	<5	<0.3	8	1	2	5200	7.5	<5
V-15000-5	Lab Dup.	17000	<2	2	290	<5	<5	<0.3	10	<1	2	5100	7.4	<5
V-15000-6		19000	<2	2	310	<5	<5	<0.3	14	2	2	8800	8.2	<5
V-15000-7		7800	<2	2	150	<5	<5	<0.3	5	1	<2	3500	3.8	<5
V-15000-8		16000	<2	2	290	<5	<5	<0.3	10	1	3	4600	7.3	<5
V-15000-8	Field Dup.	14000	<2	2	240	<5	<5	<0.3	7	1	<2	3500	5.9	<5
V-20000-4		11000	<2	2	190	<5	<5	<0.3	3	<1	<2	2000	4.8	<5

TABLE 1c: Trace Elements at Venture Drill Site - June 1999 (Continued)

Unique_station_id	Replicate_id	Aluminum mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
V-250-1		84	<2	<0.01	<2	<2	<0.5	38	0.1	<2	0.2	9	10
V-250-1	Lab Dup.	66	<2	<0.01	<2	<2	<0.5	42	0.1	<2	0.2	8	7
V-250-3		40	<2	<0.01	<2	<2	<0.5	45	0.1	<2	0.2	7	13
V-250-7		30	<2	<0.01	<2	<2	<0.5	39	0.1	<2	0.1	6	8
V-500-1		33	<2	<0.01	<2	<2	<0.5	40	0.1	<2	0.1	6	8
V-500-3		59	<2	<0.01	2	<2	<0.5	53	0.1	<2	0.2	9	9
V-500-5		39	<2	<0.01	<2	<2	<0.5	43	0.1	<2	0.2	7	9
V-500-7		430	<2	<0.01	3	<2	<0.5	58	0.2	<2	0.6	34	28
V-1000-1		250	<2	<0.01	2	<2	<0.5	55	0.1	<2	0.4	20	17
V-1000-3		55	<2	<0.01	<2	<2	<0.5	48	0.1	<2	0.2	7	7
V-1000-5		38	<2	<0.01	2	<2	<0.5	52	0.1	<2	0.2	7	7
V-1000-7		150	<2	<0.01	2	<2	<0.5	52	0.1	<2	0.3	15	13
V-3000-1		44	<2	<0.01	<2	<2	<0.5	39	0.1	<2	0.2	6	8
V-3000-2		23	<2	<0.01	<2	<2	<0.5	40	0.1	<2	0.2	4	8
V-3000-3		220	<2	<0.01	2	<2	<0.5	58	0.1	<2	0.3	19	16
V-3000-4		100	<2	<0.01	2	<2	<0.5	55	0.1	<2	0.2	12	11
V-3000-5		300	<2	<0.01	3	<2	<0.5	55	0.1	<2	0.4	25	22
V-3000-5	Lab Dup.	250	<2	<0.01	2	<2	<0.5	57	0.1	<2	0.3	21	18
V-3000-5	Field Dup.	270	<2	<0.01	3	<2	<0.5	56	0.1	<2	0.4	20	15
V-3000-6		210	<2	<0.01	3	<2	<0.5	57	0.1	<2	0.4	19	16
V-3000-7		24	<2	<0.01	<2	<2	<0.5	38	0.1	<2	0.2	6	7
V-3000-8		65	<2	<0.01	<2	<2	<0.5	41	0.1	<2	0.2	8	10
V-6000-3		17	<2	<0.01	<2	<2	<0.5	27	0.1	<2	0.1	5	6
V-6000-5		220	<2	<0.01	3	<2	<0.5	60	0.2	<2	0.5	19	16
V-6000-7		140	<2	<0.01	2	<2	<0.5	40	0.1	<2	0.2	14	12
V-10000-1		51	<2	<0.01	<2	<2	<0.5	46	0.1	<2	0.2	7	9
V-10000-3		10	<2	<0.01	<2	<2	<0.5	32	0.1	<2	0.1	3	6
V-10000-5		210	<2	<0.01	2	<2	<0.5	66	0.2	<2	0.8	19	15
V-10000-7		120	<2	<0.01	2	<2	<0.5	58	0.1	<2	0.3	15	12
V-10000-7	Field Dup.	290	<2	<0.01	3	<2	<0.5	56	0.1	<2	0.5	23	18
V-15000-1		38	<2	<0.01	<2	<2	<0.5	40	0.1	<2	0.3	9	10
V-15000-2		55	<2	<0.01	2	<2	<0.5	50	0.1	<2	0.3	12	10
V-15000-2	Field Dup.	49	<2	<0.01	2	<2	<0.5	45	0.1	<2	0.2	12	8
V-15000-3		100	<2	<0.01	4	<2	<0.5	86	0.2	<2	0.4	19	15
V-15000-4		21	<2	<0.01	<2	<2	<0.5	43	0.1	<2	0.2	4	7
V-15000-5		150	<2	<0.01	2	<2	<0.5	66	0.2	<2	0.4	12	11
V-15000-5	Lab Dup.	140	<2	<0.01	2	<2	<0.5	65	0.2	<2	0.3	12	12
V-15000-6		280	<2	<0.01	3	<2	<0.5	76	0.2	<2	0.5	21	19
V-15000-7		49	<2	<0.01	2	<2	<0.5	35	0.1	<2	0.2	8	8
V-15000-8		130	<2	<0.01	3	<2	<0.5	63	0.2	<2	0.4	13	13
V-15000-8	Field Dup.	83	<2	<0.01	2	<2	<0.5	57	0.2	<2	0.3	9	10
V-20000-4		28	<2	<0.01	<2	<2	<0.5	47	0.1	<2	0.2	5	7

TABLE 2c: Petroleum Hydrocarbons at Venture Drill Site - June 1999

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₂₀ mg/kg	C ₂₁ -C ₃₀ mg/kg	TEH (C ₁₁ -C ₃₀) mg/kg	TPH mg/kg
V-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.26	0.999	2.26	2.26
V-250-1	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.27	0.992	3.26	3.26
V-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	34.8	2.6	37.40	37.4
V-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	26.8	2.52	29.32	29.3
V-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.23	1.5	2.73	2.73
V-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.38	1.46	5.84	5.85
V-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.37	1.58	2.95	2.95
V-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.06	1.78	3.84	3.84
V-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.657	1.33	1.99	1.99
V-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.68	1.63	6.31	6.31
V-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.963	1.69	2.65	2.66
V-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.2	1.85	4.05	4.05
V-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.798	1.66	2.46	2.46
V-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1	1.51	2.51	2.51
V-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.27	2.16	3.43	3.43
V-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.26	2.19	3.45	3.46
V-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.834	1.78	2.61	2.61
V-3000-5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.725	1.47	2.20	2.2
V-3000-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.6	2.74	4.34	4.34
V-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.03	2	3.03	3.03
V-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.839	1.82	2.66	2.66
V-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1	1.38	2.38	2.38
V-6000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.695	1.13	1.83	1.83
V-6000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.744	1.32	2.06	2.07
V-6000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.625	1.1	1.73	1.73
V-10000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.79	3.76	5.55	5.54
V-10000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.24	2.4	3.64	3.65
V-10000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.68	2.22	3.90	3.89
V-10000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.79	2.83	4.62	4.62
V-10000-7	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.1	2.11	3.21	3.21
V-15000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.34	3.53	5.87	5.87
V-15000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.828	1.82	2.65	2.65
V-15000-2	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.72	4.37	6.09	6.09
V-15000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.41	2.92	4.33	4.32
V-15000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.32	2.96	5.28	5.28
V-15000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.33	1.62	2.95	2.95
V-15000-5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.43	2.68	4.11	4.11
V-15000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.68	6.03	10.71	10.7
V-15000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.786	1.19	1.98	1.98
V-15000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.96	5.54	8.50	8.49
V-15000-8	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.06	4.68	6.74	6.74
V-20000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.817	1.7	2.52	2.51

TABLE 3c: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - June 1999 (Continued)

Unique_station_id	Replicate_id	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benz(a,h)perylene mg/kg
V-250-1		< 0.05	< 0.05	< 0.05	< 0.05
V-250-1	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-250-3		< 0.05	< 0.05	< 0.05	< 0.05
V-250-7		< 0.05	< 0.05	< 0.05	< 0.05
V-500-1		< 0.05	< 0.05	< 0.05	< 0.05
V-500-3		< 0.05	< 0.05	< 0.05	< 0.05
V-500-5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-7		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-2		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-4		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-6		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-8		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-7	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-2		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-2	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-4		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-6		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-8		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-8	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-20000-4		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4c: Sediment Quality at Venture Drill Site - June 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
V-250-1		0.1	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0003	<0.20
V-250-1	Lab Dup.			< 0.1	99.3	< 0.1	0.8		
V-250-3		0.1	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0006	0.22
V-250-7		0.1	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0004	0.40
V-500-1		0.1	0.1	< 0.1	99.2	< 0.1	0.8	0.0018	<0.20
V-500-3		0.1	< 0.1	< 0.1	99.1	< 0.1	0.8	0.0012	0.80
V-500-5		0.1	0.1	< 0.1	99.1	< 0.1	0.9	0.0003	0.33
V-500-7		0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0004	0.35
V-1000-1		0.1	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0009	0.65
V-1000-3		0.1	< 0.1	< 0.1	99.2	< 0.1	0.7	0.0005	0.30
V-1000-5		0.1	0.1	< 0.1	99.2	< 0.1	0.8	0.0005	0.32
V-1000-7		0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0007	0.23
V-3000-1		0.1	0.3	< 0.1	99.1	< 0.1	0.8	0.0005	0.38
V-3000-2		0.1	0.1	< 0.1	99	< 0.1	0.9	0.0006	<0.20
V-3000-3		0.2	< 0.1	0.1	99	< 0.1	0.9	0.0004	0.27
V-3000-4		0.1	< 0.1	0.1	98.9	< 0.1	1	0.0018	<0.20
V-3000-5		0.2	< 0.1	0.3	98.8	0.1	0.9	0.0004	0.27
V-3000-5	Lab Dup.			< 0.1	99.2	0.1	0.7		
V-3000-5	Field Dup.	0.2	< 0.1	0.1	99	< 0.1	0.9	0.0004	0.30
V-3000-6		0.1	< 0.1	< 0.1	99.2	< 0.1	0.7	0.0004	<0.20
V-3000-7		0.1	0.3	< 0.1	99.3	< 0.1	0.7	0.0005	<0.20
V-3000-8		0.1	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0003	<0.20
V-6000-3		0.1	0.4	< 0.1	99.3	< 0.1	0.7	0.0005	0.42
V-6000-5		0.2	0.3	< 0.1	99.1	< 0.1	0.9	0.0004	<0.20
V-6000-7		0.1	< 0.1	< 0.1	99.2	0.1	0.8	0.0004	0.37
V-10000-1		0.4	0.1	0.2	97.9	0.6	1.4	0.0009	<0.20
V-10000-3		0.2	0.4	< 0.1	99.3	0.1	0.7	0.0008	<0.20
V-10000-5		0.3	0.5	< 0.1	99.1	0.1	0.9	0.0006	0.45
V-10000-7		0.2	0.2	< 0.1	99	0.1	0.9	0.0008	<0.20
V-10000-7	Field Dup.	0.2	< 0.1	< 0.1	99	< 0.1	1	0.0016	<0.20
V-15000-1		0.4	0.2	4.8	93.3	0.6	1.3	0.0004	<0.20
V-15000-2		0.4	0.1	2.2	96.7	0.2	0.9	0.0007	0.48
V-15000-2	Field Dup.	0.3	0.2	1.4	96.9	0.5	1.2	0.0005	<0.20
V-15000-3		0.7	0.3	< 0.1	98	0.5	1.3	0.0008	<0.20
V-15000-4		0.2	< 0.1	< 0.1	99.2	0.1	0.7	0.0005	<0.20
V-15000-5		0.4	< 0.1	< 0.1	98.8	< 0.1	1.1	0.0005	0.25
V-15000-5	Lab Dup.			< 0.1	98.7	0.1	1.2		
V-15000-6		0.6	0.1	< 0.1	98.9	0.1	1	0.0012	<0.20
V-15000-7		0.1	0.1	< 0.1	99.3	< 0.1	0.6	0.0004	0.22
V-15000-8		1.2	0.2	< 0.1	97.1	1.1	1.8	0.0002	<0.20
V-15000-8	Field Dup.	1.1	0.1	< 0.1	97.7	0.8	1.3	0.0009	0.73
V-20000-4		0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0007	0.30

TABLE 5c: Toxicity at Venture Drill Site - June 1999

Unique_station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echisoid % Fertilization	Fertilization IC50	Microtox EC50
				Mortality	Control Mortality %			
V-250-1		1.94	<20	12	3	62.3	>100%	>100%
V-250-1	Lab Dup.							
V-250-3		1.35	<20	11	3	46.3	98.10%	>100%
V-250-7		1.59	<20	11	3	82.5	>100%	>100%
V-500-1		2.19	<20	8	3	81.3	>100%	>100%
V-500-3		1.08	<20	8	3	58.0	>100%	>100%
V-500-5		1.87	<20	7	3	86.5	>100%	>100%
V-500-7		2.32	<20	9	3	17.5	62.30%	>100%
V-1000-1								
V-1000-3								
V-1000-5								
V-1000-7								
V-3000-1		1.14	<20	8	3	79.3	>100%	>100%
V-3000-2								
V-3000-3		1.96	<20	11	3	77.3	>100%	>100%
V-3000-4								
V-3000-5		2.95	<20	7	3	76.5	>100%	>100%
V-3000-5	Lab Dup.							
V-3000-5	Field Dup.	3.38	<20	8	3	80.8	>100%	>100%
V-3000-6								
V-3000-7		0.54	<20	2	3	56.5	>100%	>100%
V-3000-8								
V-6000-3								
V-6000-5								
V-6000-7								
V-10000-1								
V-10000-3								
V-10000-5								
V-10000-7								
V-10000-7	Field Dup.							
V-15000-1								
V-15000-2								
V-15000-2	Field Dup.							
V-15000-3								
V-15000-4								
V-15000-5								
V-15000-5	Lab Dup.							
V-15000-6								
V-15000-7								
V-15000-8								
V-15000-8	Field Dup.							
V-20000-4		2.47	<20	6	3	29.3	82.00%	>100%

**Laboratory Analytical Data for Sediment
from Venture Field, November 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1d: Trace Elements at Venture Drill Site - November 1999

Unique station id	Replicate id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
V-250-1		7600	<2	2	160	<5	<5	<0.3	4	1	<2	3100	4	<5
V-250-3		10000	<2	2	260	<5	<5	<0.3	5	1	<2	4100	5.5	<5
V-250-5		8500	<2	<2	350	<5	<5	<0.3	3	1	<2	2300	4.1	<5
V-250-7		7300	<2	2	210	<5	<5	<0.3	3	1	<2	2800	3.5	<5
V-500-1		11000	<2	2	210	<5	<5	<0.3	19	2	3	9700	7.6	<5
V-500-1	Lab Dup.	10000	<2	2	200	<5	<5	<0.3	17	2	2	7000	6.1	<5
V-500-3		10000	<2	2	220	<5	<5	<0.3	5	1	<2	3300	4.8	<5
V-500-5		9900	<2	2	190	<5	<5	<0.3	6	1	2	3900	5.5	<5
V-500-5	Field Dup.	9100	<2	2	180	<5	<5	<0.3	4	1	<2	2300	4.3	<5
V-500-7		11000	<2	2	220	<5	<5	<0.3	31	3	3	14000	9.7	<5
V-500-7	Lab Dup.													
V-1000-1		11000	<2	2	210	<5	<5	<0.3	5	1	<2	3600	5.1	<5
V-1000-3		10000	<2	2	210	<5	<5	<0.3	7	1	2	5000	5.5	<5
V-1000-5		10000	<2	2	180	<5	<5	<0.3	14	2	2	7900	7.7	<5
V-1000-7		12000	<2	2	240	<5	<5	<0.3	14	2	3	9600	8.7	<5
V-3000-1		7900	<2	<2	150	<5	<5	<0.3	3	1	<2	2300	3.6	<5
V-3000-2		8100	<2	2	160	<5	<5	<0.3	3	1	<2	2700	4	<5
V-3000-3		12000	<2	2	200	<5	<5	<0.3	18	2	3	9000	8.1	<5
V-3000-3	Lab Dup.	12000	<2	2	210	<5	<5	<0.3	17	2	2	8200	8	<5
V-3000-4		12000	<2	2	230	<5	<5	<0.3	22	3	4	14000	9.4	<5
V-3000-5		12000	<2	2	200	<5	<5	<0.3	18	3	3	14000	9.9	<5
V-3000-6		11000	<2	2	200	<5	<5	<0.3	13	2	2	8200	7.3	<5
V-3000-7		7400	<2	2	130	<5	<5	<0.3	4	1	<2	3800	3.8	<5
V-3000-8		7200	<2	<2	140	<5	<5	<0.3	3	1	<2	2600	3.8	<5
V-6000-3		5900	<2	<2	120	<5	<5	<0.3	<2	<1	<2	1100	3.1	<5
V-6000-5		12000	<2	3	200	<5	<5	<0.3	38	5	6	25000	13	<5
V-6000-7		8800	<2	2	170	<5	<5	<0.3	13	2	3	9500	6.5	<5
V-10000-1		12000	<2	2	240	<5	<5	<0.3	9	1	2	4500	6.9	<5
V-10000-1	Field Dup.	9900	<2	2	210	<5	<5	<0.3	7	1	2	3700	6	<5
V-10000-3		5700	<2	<2	120	<5	<5	<0.3	2	<1	<2	1200	2.6	<5
V-10000-3	Lab Dup.	5000	<2	<2	100	<5	<5	<0.3	<2	<1	<2	880	2.3	<5
V-10000-5		15000	<2	2	260	<5	<5	<0.3	15	4	3	10000	9.5	<5
V-10000-7		11000	<2	3	200	<5	<5	<0.3	16	2	3	11000	7.8	<5
V-15000-1		7700	<2	3	170	<5	<5	<0.3	6	1	2	3400	6.2	<5
V-15000-1	Field Dup.	5200	<2	3	100	<5	<5	<0.3	4	<1	2	2000	4.6	<5
V-15000-2		8500	<2	4	180	<5	<5	<0.3	7	1	2	4000	6.3	<5
V-15000-3		19000	<2	5	360	<5	<5	<0.3	15	2	2	7900	9	5
V-15000-4		8900	<2	2	190	<5	<5	<0.3	3	1	<2	2300	4.7	<5
V-15000-5		16000	<2	2	280	<5	<5	<0.3	13	2	3	6900	8.4	<5
V-15000-6		18000	<2	2	310	<5	<5	<0.3	16	2	3	8800	8.9	<5
V-15000-6	Field Dup.	17000	<2	3	290	<5	<5	<0.3	19	3	4	12000	8.8	<5
V-15000-7		5100	<2	2	98	<5	<5	<0.3	3	<1	<2	3300	2.4	<5
V-15000-8		8300	<2	<2	150	<5	<5	<0.3	4	<1	<2	1400	3.5	<5
V-15000-8	Lab Dup.	8000	<2	2	180	<5	<5	<0.3	6	1	<2	2200	4.7	<5
V-20000-4		10000	<2	2	200	<5	<5	<0.3	4	1	<2	2600	5	<5

TABLE 1d: Trace Elements at Venture Drill Site - November 1999 (Continued)

Unique station id	Replicate id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Sructium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
V-250-1		74	<2	<0.01	<2	<2	<0.5	38	0.1	<2	0.2	7	7
V-250-3		100	<2	<0.01	2	<2	<0.5	50	0.1	<2	0.3	10	10
V-250-5		37	<2	<0.01	<2	<2	<0.5	46	0.1	<2	0.2	5	6
V-250-7		78	<2	<0.01	<2	<2	<0.5	36	0.1	<2	0.2	6	6
V-500-1		370	<2	<0.01	2	<2	<0.5	51	0.1	<2	0.4	22	20
V-500-1	Lab Dup.	250	<2	<0.01	2	<2	<0.5	46	0.1	<2	0.3	16	15
V-500-3		63	<2	<0.01	2	<2	<0.5	50	0.1	<2	0.2	8	8
V-500-5		110	<2	<0.01	2	<2	<0.5	47	0.1	<2	0.2	10	8
V-500-5	Field Dup.	43	<2	<0.01	2	<2	<0.5	44	0.1	<2	0.2	6	7
V-500-7		570	<2	<0.01	3	<2	<0.5	52	0.1	<2	0.8	32	25
V-500-7	Lab Dup.												
V-1000-1		96	<2	<0.01	2	<2	<0.5	52	0.1	<2	0.2	9	9
V-1000-3		160	<2	<0.01	2	<2	<0.5	52	0.1	<2	0.2	13	11
V-1000-5		320	<2	<0.01	2	<2	<0.5	49	0.1	<2	0.5	20	16
V-1000-7		350	<2	<0.01	2	<2	<0.5	60	0.1	<2	0.4	24	18
V-3000-1		62	<2	<0.01	<2	<2	<0.5	39	0.1	<2	0.2	6	7
V-3000-2		53	<2	<0.01	<2	<2	<0.5	39	0.1	<2	0.2	6	7
V-3000-3		350	<2	<0.01	3	<2	<0.5	56	0.1	<2	0.4	25	18
V-3000-3	Lab Dup.	300	<2	<0.01	2	<2	<0.5	59	0.1	<2	0.4	21	33
V-3000-4		570	<2	<0.01	3	<2	<0.5	57	0.2	<2	0.5	29	23
V-3000-5		500	<2	<0.01	3	<2	<0.5	54	0.1	<2	0.7	28	22
V-3000-6		260	<2	<0.01	2	<2	<0.5	53	0.1	<2	0.4	20	16
V-3000-7		76	<2	<0.01	<2	<2	<0.5	38	0.1	<2	0.2	9	7
V-3000-8		46	<2	<0.01	<2	<2	<0.5	35	0.1	<2	0.2	6	6
V-6000-3		9	<2	<0.01	<2	<2	<0.5	30	0.1	<2	0.1	3	4
V-6000-5		1000	<2	<0.01	4	<2	<0.5	54	0.1	2	1.1	52	41
V-6000-7		280	<2	<0.01	2	<2	<0.5	42	0.1	<2	0.4	24	15
V-10000-1		94	<2	<0.01	2	<2	<0.5	58	0.2	<2	0.3	12	12
V-10000-1	Field Dup.	86	<2	<0.01	2	<2	<0.5	50	0.1	<2	0.2	10	8
V-10000-3		10	<2	<0.01	<2	<2	<0.5	30	0.1	<2	0.2	3	5
V-10000-3	Lab Dup.	9	<2	<0.01	<2	<2	<0.5	26	0.1	<2	0.2	2	5
V-10000-5		340	<2	<0.01	3	<2	<0.5	65	0.2	<2	0.6	26	18
V-10000-7		310	<2	<0.01	3	<2	<0.5	52	0.1	<2	0.5	25	18
V-15000-1		56	<2	<0.01	2	<2	<0.5	44	0.1	<2	0.3	10	7
V-15000-1	Field Dup.	36	<2	<0.01	<2	<2	<0.5	29	0.1	<2	0.2	7	6
V-15000-2		53	<2	<0.01	2	<2	<0.5	44	0.1	<2	0.3	11	7
V-15000-3		100	<2	<0.01	3	<2	<0.5	82	0.2	<2	0.4	19	13
V-15000-4		45	<2	<0.01	<2	<2	<0.5	45	0.1	<2	0.2	6	6
V-15000-5		270	<2	<0.01	3	<2	<0.5	72	0.2	<2	0.4	19	17
V-15000-6		340	<2	<0.01	3	<2	<0.5	77	0.2	<2	0.6	23	18
V-15000-6	Field Dup.	490	<2	<0.01	4	<2	<0.5	76	0.2	<2	0.8	29	22
V-15000-7		22	<2	<0.01	<2	<2	<0.5	26	<0.1	<2	0.2	7	7
V-15000-8		26	<2	<0.01	<2	<2	<0.5	33	0.1	<2	0.2	5	6
V-15000-8	Lab Dup.	48	<2	<0.01	<2	<2	<0.5	45	0.1	<2	0.2	6	8
V-20000-4		45	<2	<0.01	<2	<2	<0.5	48	0.1	<2	0.2	7	6

TABLE 2d: Petroleum Hydrocarbons at Venture Drill Site - November 1999

Unique station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₆ mg/kg	C ₁₇ -C ₂₁ mg/kg	TEH (C ₁₁ -C ₂₁) mg/kg	TPH mg/kg
V-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.584	1.2	< 3	< 3
V-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.61	0.932	3.54	3.54
V-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	14.3	0.885	15.2	15.2
V-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.42	0.882	3.3	3.3
V-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.395	0.683	< 3	< 3
V-500-1	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.436	0.756	< 3	< 3
V-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.53	1.19	< 3	< 3
V-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.527	1.33	< 3	< 3
V-500-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.641	0.865	< 3	< 3
V-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.721	0.999	< 3	< 3
V-500-7	Lab Dup.									
V-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.37	1.1	< 3	< 3
V-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.423	0.77	< 3	< 3
V-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-6000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-6000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-6000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-10000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-10000-1	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-10000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-10000-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-10000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-10000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-1	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-6	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-15000-8	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
V-20000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3

TABLE 3d: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - November 1999 (Continued)

Unique station id	Replicate id	Pyrene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo[ghi]perylene mg/kg
V-250-1		< 0.05	< 0.05	< 0.05	< 0.05
V-250-3		< 0.05	< 0.05	< 0.05	< 0.05
V-250-5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-7		< 0.05	< 0.05	< 0.05	< 0.05
V-500-1		< 0.05	< 0.05	< 0.05	< 0.05
V-500-1	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-500-3		< 0.05	< 0.05	< 0.05	< 0.05
V-500-5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-5	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-500-7		< 0.05	< 0.05	< 0.05	< 0.05
V-500-7	Lab Dup.				
V-1000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-2		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-4		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-6		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-8		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-6000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-1	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-10000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-3	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-10000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-10000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-1		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-1	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-2		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-3		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-4		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-5		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-6		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-6	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-15000-7		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-8		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-8	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-20000-4		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4d: Sediment Quality at Venture Drill Site - November 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SFM g/L	Bs Content
V-250-1		0.2	< 0.1	< 0.1	99.2	< 0.1	0.7	0.0007	0.22
V-250-3		0.2	< 0.1	< 0.1	99.1	0.1	0.8	0.0006	<0.30
V-250-5		0.2	< 0.1	< 0.1	99.1	0.1	0.8	0.0005	<0.20
V-250-7		0.1	0.1	< 0.1	99.2	< 0.1	0.7	0.0003	<0.20
V-500-1		0.2	< 0.1	< 0.1	99.1	0.1	0.8	0.0008	<0.20
V-500-1	Lab Dup.	0.2	< 0.1	< 0.1	99	0.1	0.8		
V-500-3		0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0004	<0.3
V-500-5		0.2	< 0.1	< 0.1	99.1	0.1	0.9	0.0011	0.22
V-500-5	Field Dup.	0.2	< 0.1	< 0.1	99	0.1	0.9	0.0012	0.58
V-500-7		0.2	< 0.1	< 0.1	99.3	0.1	0.7	0.0013	<0.30
V-500-7	Lab Dup.								
V-1000-1		0.2	< 0.1	< 0.1	99	0.1	1	0.0008	0.33
V-1000-3		0.2	< 0.1	< 0.1	99	0.1	0.9	0.0005	<0.20
V-1000-5		0.2	< 0.1	< 0.1	99.1	< 0.1	1.1	0.0009	0.83
V-1000-7		0.2	< 0.1	< 0.1	98.9	< 0.1	1.1	0.0004	<0.20
V-3000-1		0.1	0.1	< 0.1	99.1	< 0.1	1	0.0005	<0.20
V-3000-2		0.1	0.1	0.1	99.1	< 0.1	0.8	0.0005	0.25
V-3000-3		0.2	0.1	< 0.1	99	< 0.1	1	0.0005	<0.20
V-3000-3	Lab Dup.	0.2	0.1	< 0.1	98.9	< 0.1	1.1		
V-3000-4		0.2	< 0.1	< 0.1	99	< 0.1	1	0.0005	0.20
V-3000-5		0.2	< 0.1	< 0.1	98.9	0.1	1	0.0004	<0.33
V-3000-6		0.2	< 0.1	< 0.1	99	< 0.1	1	0.0005	0.22
V-3000-7		0.1	< 0.1	< 0.1	99	< 0.1	1	0.0006	<0.3
V-3000-8		0.1	< 0.1	< 0.1	99	< 0.1	1	0.0004	<0.20
V-6000-3		0.2	< 0.1	0.1	98.9	0.1	1	0.0005	<0.20
V-6000-5		0.3	< 0.1	< 0.1	99	< 0.1	1.1	0.0005	0.80
V-6000-7		0.2	< 0.1	< 0.1	98.9	< 0.1	1.1	0.0004	<0.20
V-10000-1		0.8	< 0.1	0.1	98.3	0.3	1.3	0.0012	<0.20
V-10000-1	Field Dup.	0.9	0.1	0.2	98.6	0.2	1	0.0002	<0.20
V-10000-3		0.2	0.1	< 0.1	98.9	< 0.1	1.3	0.0005	<0.20
V-10000-3	Lab Dup.	0.2	0.1	< 0.1	98.9	< 0.1	1.1		
V-10000-5		0.4	0.1	< 0.1	98.7	0.1	1.2	0.0016	<0.20
V-10000-7		0.3	< 0.1	< 0.1	99	< 0.1	1	0.0005	0.22
V-15000-1		1.2	0.6	4.8	92.8	0.6	1.8	0.0006	0.40
V-15000-1	Field Dup.	1	0.2	1.8	96.4	0.4	1.4	0.0005	<0.20
V-15000-2		1.1	< 0.1	4.6	93.9	0.2	1.3	0.0003	<0.20
V-15000-3		1.2	0.2	< 0.1	97.7	0.4	2	0.0005	<0.20
V-15000-4		0.2	< 0.1	0.1	99	< 0.1	0.9	0.0004	<0.20
V-15000-5		0.7	< 0.1	< 0.1	98.8	0.1	1.1	0.0003	<0.20
V-15000-6		1	0.1	0.4	97.9	0.2	1.5	0.0005	<0.20
V-15000-6	Field Dup.	1	0.1	1.2	97.3	0.1	1.4	0.0006	<0.20
V-15000-7		0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0006	0.20
V-15000-8		1	0.4	0.1	98.2	0.4	1.3	0.0009	0.25
V-15000-8	Lab Dup.	0.9	0.2	0.5	97.8	0.4	1.2		
V-20000-4		0.3	< 0.1	< 0.1	99	< 0.1	1	0.0003	<0.20

TABLE 5d: Toxicity at Venture Drill Site - November 1999

Unique station id	Replicate id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echinoid % Fertilization	Fertilization IC50	Microtox EC50
				Mortality %	Control Mortality %			
V-250-1		<0.50	<10	2	0	84.3	>100%	>100%
V-250-3		<0.50	<10	2	0	93.3	>100%	>100%
V-250-5		<0.50	<10	0	0	92.8	>100%	>100%
V-250-7		<0.50	<10	1	0	91.0	>100%	>100%
V-500-1		<0.50	<10	4	0	95.0	>100%	>100%
V-500-1	Lab Dup.							
V-500-3		<0.50	<10	4	0	89.8	>100%	>100%
V-500-5		<0.50	<10	4	0	89.5	>100%	>100%
V-500-5	Field Dup.	<0.50	<10	5	0	82.0	>100%	>100%
V-500-7		<0.50	<10	7	0	89.8	>100%	>100%
V-500-7	Lab Dup.	<0.50						
V-1000-1								
V-1000-3								
V-1000-5								
V-1000-7								
V-3000-1		<0.50	<10	8	0	88.0	>100%	>100%
V-3000-2								
V-3000-3		<0.50	<10	6	0	87.8	>100%	>100%
V-3000-3	Lab Dup.							
V-3000-4								
V-3000-5		<0.50	<10	5	0	75.0	>100%	>100%
V-3000-6								
V-3000-7		<0.50	<10	7	0	76.5	>100%	>100%
V-3000-8								
V-6000-3								
V-6000-5								
V-6000-7								
V-10000-1								
V-10000-1	Field Dup.							
V-10000-3								
V-10000-3	Lab Dup.							
V-10000-5								
V-10000-7								
V-15000-1								
V-15000-1	Field Dup.							
V-15000-2								
V-15000-3								
V-15000-4								
V-15000-5								
V-15000-6								
V-15000-6	Field Dup.							
V-15000-7								
V-15000-8								
V-15000-8	Lab Dup.							
V-20000-4		<0.50	<10	4	0	90.3	>100%	>100%

**Laboratory Analytical Data for Sediment
from Venture Field, June 2000**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1a: Trace Elements at Venture Drill Site - Spring 2000

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
V-250-1D4		8900	<2	<2	160	<5	<0.3	4	1	2	3200	4.3	<5
V-250-3D4		9400	<2	<2	220	<5	<0.3	3	1	<2	2000	4	<5
V-250-5D4		8300	<2	<2	180	<5	<0.3	4	<1	<2	2000	3.8	<5
V-250-5D4	Lab Dup.	8900	<2	2	170	<5	<0.3	4	1	<2	2100	3.9	<5
V-250-7D4		7400	<2	<2	240	<5	<0.3	2	<1	<2	1400	3.4	<5
V-250-7-D4	Field Dup.	8900	<2	<2	190	<5	<0.3	3	<1	<2	2000	3.9	<5
V-500-1D4		9200	<2	<2	170	<5	<0.3	7	1	<2	3800	4.9	<5
V-500-2D4		11000	<2	2	200	<5	<0.3	5	1	<2	3300	4.9	<5
V-500-3D4		10000	<2	2	200	<5	<0.3	6	1	<2	3500	4.7	<5
V-500-4D4		11000	<2	2	200	<5	<0.3	6	1	<2	3000	5.2	<5
V-500-5D4		9200	<2	<2	170	<5	<0.3	4	<1	<2	1800	4.1	<5
V-500-6D4		8700	<2	<2	200	<5	<0.3	3	<1	<2	2200	4.1	<5
V-500-6-D4	Field Dup.	7700	<2	<2	200	<5	<0.3	2	<1	<2	1400	3.2	<5
V-500-7D4		13000	<2	<2	240	<5	<0.3	7	1	2	3900	5.7	<5
V-500-8D4		12000	<2	2	200	<5	<0.3	17	3	4	15000	10	<5
V-1000-1D4		7500	<2	<2	130	<5	<0.3	6	1	<2	4500	4.5	<5
V-1000-3D4		11000	<2	2	230	<5	<0.3	6	1	<2	3700	5.5	<5
V-1000-5D4		12000	<2	2	200	<5	<0.3	7	1	2	4100	6.1	<5
V-1000-7D4		12000	<2	<2	210	<5	<0.3	8	1	2	5700	6.6	<5
V-3000-1D4		8100	<2	<2	160	<5	<0.3	2	<1	<2	1400	3.5	<5
V-3000-3D4		12000	<2	2	230	<5	<0.3	9	2	2	5800	6.8	<5
V-3000-3-D4	Field Dup.	12000	<2	<2	220	<5	<0.3	6	1	<2	3000	5.3	<5
V-3000-5D4		12000	<2	<2	230	<5	<0.3	6	1	<2	3200	5.2	<5
V-3000-5D4	Lab Dup.	12000	<2	<2	220	<5	<0.3	6	1	<2	3200	5.4	<5
V-3000-7D4		8200	<2	<2	160	<5	<0.3	4	<1	<2	2200	3.8	<5
V-15000-1D4		8000	<2	2	170	<5	<0.3	5	1	<2	3200	6.3	<5
V-15000-3D4		22000	<2	6	400	<5	<0.3	15	2	3	9800	9.7	6
V-15000-5D4		17000	<2	<2	290	<5	<0.3	8	1	2	4100	6.9	<5
V-15000-7D4		7700	<2	<2	130	<5	<0.3	5	1	<2	3000	3.5	<5

TABLE 1a: Trace Elements at Venture Drill Site - Spring 2000 (Continued)

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	TiO mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
V-250-1D4		93	<2	<0.01	2	<2	40	0.1	2	0.2	8	11
V-250-3D4		34	<2	<0.01	<2	<2	44	0.1	<2	0.2	5	6
V-250-5D4		36	<2	<0.01	<2	<2	42	0.1	<2	0.2	6	8
V-250-5D4	Lab Dup.	46	<2	<0.01	<2	<2	43	0.1	<2	0.2	6	7
V-250-7D4		21	<2	<0.01	<2	<2	36	0.1	<2	0.1	4	5
V-250-7-D4	Field Dup.	32	<2	<0.01	<2	<2	41	0.1	<2	0.2	5	5
V-500-1D4		100	<2	<0.01	2	<2	41	0.1	<2	0.2	10	10
V-500-2D4		66	<2	<0.01	<2	<2	45	0.1	<2	0.2	8	7
V-500-3D4		77	<2	<0.01	2	<2	46	0.1	<2	0.2	9	8
V-500-4D4		78	<2	<0.01	2	<2	52	0.1	<2	0.2	8	9
V-500-5D4		31	<2	<0.01	<2	<2	41	0.1	<2	0.2	5	8
V-500-6D4		54	<2	<0.01	<2	<2	40	0.1	<2	0.2	5	8
V-500-6-D4	Field Dup.	12	<2	<0.01	<2	<2	33	0.1	<2	0.1	4	4
V-500-7D4		76	<2	<0.01	2	<2	55	0.2	<2	0.3	10	8
V-500-8D4		520	<2	<0.01	3	<2	52	0.1	<2	0.6	33	24
V-1000-1D4		140	<2	<0.01	<2	<2	35	0.1	<2	0.2	11	10
V-1000-3D4		100	<2	<0.01	2	<2	50	0.1	<2	0.2	10	8
V-1000-5D4		120	<2	<0.01	2	<2	52	0.1	<2	0.3	10	9
V-1000-7D4		160	<2	<0.01	2	<2	52	0.1	<2	0.3	14	11
V-3000-1D4		24	<2	<0.01	<2	<2	35	0.1	<2	0.2	3	5
V-3000-3D4		180	<2	<0.01	2	<2	57	0.2	<2	0.3	15	12
V-3000-3-D4	Field Dup.	67	<2	<0.01	2	<2	58	0.1	<2	0.2	8	7
V-3000-5D4		74	<2	<0.01	2	<2	57	0.1	<2	0.3	9	7
V-3000-5D4	Lab Dup.	78	<2	<0.01	2	<2	55	0.1	<2	0.3	9	7
V-3000-7D4		26	<2	<0.01	2	<2	36	0.1	<2	0.2	6	8
V-15000-1D4		64	<2	<0.01	<2	<2	41	0.1	<2	0.5	10	6
V-15000-3D4		96	<2	0.01	4	<2	91	0.3	<2	0.5	21	14
V-15000-5D4		110	<2	<0.01	2	<2	70	0.2	<2	0.3	11	9
V-15000-7D4		31	<2	<0.01	<2	<2	36	0.1	<2	0.2	7	5

TABLE 2a: Petroleum Hydrocarbons at Venture Drill Site - Spring 2000

Unique station id	Replicate id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₉ -C ₁₀ mg/kg	C ₁₁ -C ₁₂ mg/kg	C ₁₃ -C ₁₄ mg/kg	TEH (C ₁₁ -C ₁₄) mg/kg
V-250-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-250-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.43	0.611	5.041
V-250-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.887	0.532	1.419
V-250-5D4	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.17	0.615	1.785
V-250-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.03	0.651	1.681
V-250-7-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.602	0.368	0.97
V-500-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-500-2D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.906	0.553	1.459
V-500-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	6.02	0.712	6.732
V-500-4D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.331	0.793	1.124
V-500-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	0.736	0.736
V-500-6D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.956	0.413	1.369
V-500-6-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.5	0.421	1.921
V-500-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.718	0.567	1.285
V-500-8D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.329	0.624	0.953
V-1000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-1000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-1000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-1000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-3-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-5D4	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-15000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-15000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.04	4.14	8.18
V-15000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-15000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50

TABLE 3a: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - Spring 2000 (Continued)

Unique_station_id	Replicate_id	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
V-250-1D4		< 0.05	< 0.05	< 0.05	< 0.05
V-250-3D4		< 0.05	< 0.05	< 0.05	< 0.05
V-250-5D4		< 0.05	< 0.05	< 0.05	< 0.05
V-250-5D4	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-250-7D4		< 0.05	< 0.05	< 0.05	< 0.05
V-250-7-D4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-500-1D4		< 0.05	< 0.05	< 0.05	< 0.05
V-500-2D4		< 0.05	< 0.05	< 0.05	< 0.05
V-500-3D4		< 0.05	< 0.05	< 0.05	< 0.05
V-500-4D4		< 0.05	< 0.05	< 0.05	< 0.05
V-500-5D4		< 0.05	< 0.05	< 0.05	< 0.05
V-500-6D4		< 0.05	< 0.05	< 0.05	< 0.05
V-500-6-D4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-500-7D4		< 0.05	< 0.05	< 0.05	< 0.05
V-500-8D4		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-1D4		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-3D4		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-5D4		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-7D4		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-1D4		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3D4		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-3-D4	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5D4		< 0.05	< 0.05	< 0.05	< 0.05
V-3000-5D4	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-3000-7D4		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-1D4		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-3D4		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-5D4		< 0.05	< 0.05	< 0.05	< 0.05
V-15000-7D4		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4a: Sediment Quality at Venture Drill Site - Spring 2000

Unique_station_id	Replicate_id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
V-250-1D4		0.2	< 0.1	0.2	< 0.1	99.2	< 0.1	0.8	16	22
V-250-3D4		0.2	< 0.1	0.2	< 0.1	99.2	< 0.1	0.8	17	22
V-250-5D4		0.2	< 0.1	0.2	< 0.1	99.2	2.6	0.8	15	22
V-250-5D4	Lab Dup.	0.2	< 0.1	0.2	< 0.1	99.2	< 0.1	0.7	16	0
V-250-7D4		0.2	< 0.1	0.2	< 0.1	99.2	< 0.1	0.8	16	23
V-250-7-D4	Field Dup.	0.2	< 0.1	0.2	0.1	99.1	< 0.1	0.8	16	0
V-500-1D4		0.2	< 0.1	0.2	< 0.1	99.2	< 0.1	0.9	16	23
V-500-2D4		0.2	0.1	0.1	< 0.1	99.2	< 0.1	0.9	17	22
V-500-3D4		0.1	< 0.1	0.2	< 0.1	99.1	< 0.1	0.9	17	22
V-500-4D4		0.2	< 0.1	0.2	< 0.1	99.1	< 0.1	0.8	17	22
V-500-5D4		0.2	< 0.1	0.2	< 0.1	99.1	< 0.1	0.9	17	23
V-500-6D4		0.2	0.1	0.1	< 0.1	99.1	< 0.1	0.8	15	23
V-500-6-D4	Field Dup.	0.2	< 0.1	0.2	< 0.1	99.1	0.1	0.8	16	0
V-500-7D4		0.1	< 0.1	0.2	< 0.1	99	< 0.1	1	17	0
V-500-8D4		0.2	< 0.1	0.2	< 0.1	99.1	< 0.1	0.9	15	22
V-1000-1D4		0.1	< 0.1	0.1	0.4	98.8	< 0.1	0.7	14	21
V-1000-3D4		0.2	< 0.1	0.2	< 0.1	99.1	< 0.1	0.9	18	22
V-1000-5D4		0.2	< 0.1	0.2	< 0.1	99.1	0.1	0.8	18	22
V-1000-7D4		0.2	< 0.1	0.2	< 0.1	99.1	0.1	0.9	18	22
V-3000-1D4		0.2	0.1	0.1	< 0.1	99.1	< 0.1	0.8	16	18
V-3000-3D4		0.2	< 0.1	0.2	< 0.1	99.1	0.1	0.8	15	20
V-3000-3-D4	Field Dup.	0.3	0.1	0.2	< 0.1	99.1	< 0.1	0.8	18	0
V-3000-5D4		0.3	0.1	0.2	< 0.1	99.1	0.1	0.8	17	23
V-3000-5D4	Lab Dup.	0.3	0.1	0.2	< 0.1	99.1	2.7	0.9	17	0
V-3000-7D4		0.1	< 0.1	0.2	< 0.1	99.1	0.1	0.8	40	0
V-15000-1D4		1.1	0.2	0.9	2.9	95.3	0.4	1.4	16	72
V-15000-3D4		4.2	0.7	3.5	0.7	91	4.5	3.8	27	0
V-15000-5D4		0.7	0.1	0.6	< 0.1	98.6	0.2	1.1	20	43
V-15000-7D4		0.2	0.1	0.1	0.1	99.1	< 0.1	0.8	15	23

TABLE 5a: Toxicity at Venture Drill Site - Spring 2000

Unique_station_id	Replicate_id	Amphipod Survival Mortality %	Microtox EC50
V-250-1D4		7	> 98684mg/L
V-250-3D4		7	> 98684mg/L
V-250-5D4		7	> 98684mg/L
V-250-5D4	Lab Dup.		
V-250-7D4		12	> 98684mg/L
V-250-7-D4	Field Dup.	8	> 98684mg/L
V-300-1D4		3	> 98684mg/L
V-300-2D4		6	> 98684mg/L
V-300-3D4		7	> 98684mg/L
V-300-4D4		11	> 98684mg/L
V-300-5D4		7	> 98684mg/L
V-300-6D4		11	> 98684mg/L
V-300-6-D4	Field Dup.	5	
V-300-7D4		14	> 98684mg/L
V-300-8D4		9	> 98684mg/L
V-1000-1D4		13	> 98684mg/L
V-1000-3D4		7	> 98684mg/L
V-1000-5D4		2	> 98684mg/L
V-1000-7D4		6	> 98684mg/L
V-3000-1D4			
V-3000-3D4			
V-3000-3-D4	Field Dup.		
V-3000-5D4			
V-3000-5D4	Lab Dup.		
V-3000-7D4			
V-15000-1D4			
V-15000-3D4			
V-15000-5D4			
V-15000-7D4			

**Laboratory Analytical Data for Sediment
from Venture Field, November 2000**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at Venture Drill Site - Fall 2000

Unique station id	Replicate id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
V-250-1-D5		9000	< 2	2	200	< 5	< 0.3	4	1	2	2700	4.6	< 5
V-250-1-D5	Lab Dup.	8300	< 2	2	200	< 5	< 0.3	4	1	< 2	2400	4.1	< 5
V-250-2-D5		9200	< 2	2	240	< 5	< 0.3	4	< 1	< 2	2100	4.2	< 5
V-250-3-D5		8800	< 2	2	190	< 5	< 0.3	5	1	< 2	2400	4.3	< 5
V-250-4-D5													
V-250-5-D5		7500	< 2	< 2	150	< 5	< 0.3	4	1	< 2	1900	3.5	< 5
V-250-6-D5		7700	< 2	< 2	230	< 5	< 0.3	3	< 1	< 2	1700	3.5	< 5
V-250-7-D5		6900	< 2	< 2	150	< 5	< 0.3	4	< 1	< 2	1800	3.3	< 5
V-250-8-D5		6900	< 2	< 2	130	< 5	< 0.3	5	1	< 2	2200	3.4	< 5
V-500-1-D5		8300	< 2	2	160	< 5	< 0.3	5	1	< 2	2900	4.1	< 5
V-500-2-D5		8600	< 2	2	170	< 5	< 0.3	4	1	< 2	2600	4.9	< 5
V-500-3-D5		8800	< 2	2	180	< 5	< 0.3	5	1	< 2	2600	4.1	< 5
V-500-3-D5	Lab Dup.	10000	< 2	2	210	< 5	< 0.3	6	1	< 2	3300	5	< 5
V-500-4-D5		6800	< 2	< 2	130	< 5	< 0.3	3	< 1	< 2	1500	3.3	< 5
V-500-5-D5		8000	< 2	2	150	< 5	< 0.3	4	< 1	< 2	2000	3.8	< 5
V-500-6-D5		8000	< 2	< 2	180	< 5	< 0.3	2	< 1	< 2	1400	8	< 5
V-500-7-D5		5900	< 2	< 2	120	< 5	< 0.3	2	< 1	< 2	1700	7.6	< 5
V-500-8-D5		10000	< 2	2	180	< 5	< 0.3	35	4	9	17000	17	< 5
V-1000-1-D5		9000	< 2	< 2	170	< 5	< 0.3	4	1	2	2900	8.9	< 5
V-1000-3-D5		11000	< 2	< 2	220	< 5	< 0.3	4	1	2	2600	9	< 5
V-1000-5-D5		10000	< 2	2	200	< 5	< 0.3	6	1	3	4000	9.5	< 5
V-1000-7-D5		9500	< 2	< 2	190	< 5	< 0.3	6	1	2	3200	8.8	< 5
V-3000-1-D5		6700	< 2	< 2	130	< 5	< 0.3	3	< 1	2	1800	5.8	< 5
V-3000-3-D5		12000	< 2	2	220	< 5	< 0.3	8	1	3	4100	9.5	< 5
V-3000-5-D5		12000	< 2	2	220	< 5	< 0.3	9	2	3	7000	10	< 5
V-3000-7-D5		8500	< 2	2	160	< 5	< 0.3	5	1	2	2800	8.8	< 5
V-3000-7-D5	Lab Dup.	8100	< 2	< 2	150	< 5	< 0.3	3	1	< 2	2600	10	< 5
V-15000-1-D5		6200	< 2	< 2	110	< 5	< 0.3	4	< 1	< 2	1800	8	< 5
V-15000-3-D5		21000	< 2	6	420	< 5	< 0.3	17	2	7	9100	13	5
V-15000-5-D5		16000	< 2	2	290	< 5	< 0.3	8	1	8	4200	10	< 5
V-15000-7-D5		6400	< 2	2	150	< 5	< 0.3	5	1	12	3300	6.2	< 5
V-20000-4-D5		10000	< 2	2	190	< 5	< 0.3	5	1	8	2800	7.8	< 5
V-20000-6-D5		20000	< 2	2	310	< 5	< 0.3	12	2	10	6100	9.7	< 5
V-20000-6-D5	Lab Dup.	19000	< 2	2	310	< 5	< 0.3	12	2	12	6100	10	< 5

TABLE 1b: Trace Elements at Venture Drill Site - Fall 2000

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Ti mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
V-250-1-D5		60	<2	<0.01	<2	<2	43	0.1	<2	0.2	7	6
V-250-1-D5	Lab Dup.	62	<2	<0.01	<2	<2	43	0.1	<2	0.2	7	5
V-250-2-D5		35	<2	<0.01	<2	<2	47	0.1	<2	0.2	5	4
V-250-3-D5		56	<2	<0.01	<2	<2	42	0.1	<2	0.2	6	8
V-250-4-D5												
V-250-5-D5		41	<2	<0.01	<2	<2	37	0.2	<2	0.2	5	7
V-250-6-D5		30	<2	<0.01	<2	<2	38	0.1	<2	0.1	5	4
V-250-7-D5		31	<2	<0.01	<2	<2	31	0.1	<2	0.1	5	6
V-250-8-D5		48	<2	<0.01	<2	<2	32	0.1	<2	0.2	6	7
V-500-1-D5		74	<2	<0.01	<2	<2	39	0.1	<2	0.2	8	8
V-500-2-D5		53	<2	<0.01	<2	<2	42	0.1	<2	0.2	7	8
V-500-3-D5		52	<2	<0.01	<2	<2	42	0.1	<2	0.2	7	8
V-500-3-D5	Lab Dup.	84	<2	<0.01	<2	<2	48	0.1	<2	0.2	10	7
V-500-4-D5		23	<2	<0.01	<2	<2	34	0.1	<2	0.1	4	7
V-500-5-D5		31	<2	<0.01	<2	<2	39	0.1	<2	0.2	6	7
V-500-6-D5		18	<2	<0.01	<2	<2	38	0.1	<2	0.2	4	8
V-500-7-D5		24	<2	<0.01	<2	<2	28	0.1	<2	0.4	4	7
V-500-8-D5		760	<2	<0.01	3	<2	48	0.1	<2	0.8	36	38
V-1000-1-D5		81	<2	<0.01	<2	<2	43	0.1	<2	0.2	7	10
V-1000-3-D5		51	<2	<0.01	<2	<2	53	0.1	<2	0.2	7	8
V-1000-5-D5		130	<2	<0.01	2	<2	50	0.1	<2	0.3	10	12
V-1000-7-D5		80	<2	<0.01	<2	<2	45	0.1	<2	0.2	8	10
V-3000-1-D5		45	<2	<0.01	<2	<2	32	0.1	<2	0.2	5	8
V-3000-3-D5		130	<2	<0.01	2	<2	54	0.2	<2	0.3	11	12
V-3000-5-D5		250	<2	<0.01	2	<2	55	0.1	<2	0.4	16	20
V-3000-7-D5		46	<2	<0.01	<2	<2	39	0.1	<2	0.2	7	9
V-3000-7-D5	Lab Dup.	41	<2	<0.01	<2	<2	37	0.1	<2	0.2	6	8
V-15000-1-D5		36	<2	<0.01	<2	<2	31	0.1	<2	0.2	6	6
V-15000-3-D5		100	<2	<0.01	4	<2	88	0.2	<2	0.5	20	16
V-15000-5-D5		130	<2	<0.01	2	<2	69	0.2	<2	0.3	11	11
V-15000-7-D5		33	<2	<0.01	<2	<2	33	0.1	<2	0.2	8	8
V-20000-4-D5		52	<2	<0.01	<2	<2	47	0.1	<2	0.2	8	8
V-20000-6-D5		180	<2	<0.01	4	<2	80	0.3	<2	0.5	16	18
V-20000-6-D5	Lab Dup.	170	<2	<0.01	3	<2	77	0.3	<2	0.6	16	16

TABLE 2b: Petroleum Hydrocarbons at Venture Drill Site - Fall 2000

Unique station id	Replicate id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₉ mg/kg	C ₁₀ -C ₁₄ mg/kg	C ₁₅ -C ₂₀ mg/kg	TEH (C ₂₁ -C ₂₅) mg/kg
V-250-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.07	< 0.25	2.07
V-250-1-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.41	< 0.25	4.41
V-250-2-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.38	< 0.25	1.38
V-250-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.32	< 0.25	1.32
V-250-4-D5		no data	no data	no data	no data	no data	no data	no data	no data
V-250-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-250-6-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.84	< 0.25	2.84
V-250-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.732	< 0.25	0.73
V-250-8-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.963	< 0.25	0.96
V-500-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-500-2-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-500-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.902	0.432	1.33
V-500-3-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.1	< 0.25	1.10
V-500-4-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-500-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-500-6-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.4	< 0.25	0.40
V-500-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	0.00
V-500-8-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-1000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-1000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-1000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-1000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-3000-7-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-15000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-15000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-15000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-15000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-20000-4-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-20000-6-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
V-20000-6-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - Fall 2000

Unique station id	Replicate id	Naphthalene mg/kg	2-Methylnaphthalene mg/kg	1-Methylnaphthalene mg/kg	Acenaphthylene mg/kg	Acenaphthene mg/kg	Fluorene mg/kg	Phenanthrene mg/kg	Anthracene mg/kg
V-250-1-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-1-D5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-2-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-3-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-4-D5									
V-250-5-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-6-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-7-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-8-D5		0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-1-D5		0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-2-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-3-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-3-D5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-4-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-5-D5		0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-6-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-7-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-8-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-1-D5									
V-1000-3-D5									
V-1000-5-D5									
V-1000-7-D5									
V-3000-1-D5									
V-3000-3-D5									
V-3000-5-D5									
V-3000-7-D5									
V-3000-7-D5	Lab Dup.								
V-15000-1-D5									
V-15000-3-D5									
V-15000-5-D5									
V-15000-7-D5									
V-20000-4-D5									
V-20000-6-D5									
V-20000-6-D5	Lab Dup.								

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - Fall 2000

Unique station id	Replicate id	Fluoranthene mg/kg	Pyrene mg/kg	Benzo(a)anthracene mg/kg	Chrysene mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)pyrene mg/kg
V-250-1-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-1-D5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-2-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-3-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-4-D5								
V-250-5-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-6-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-7-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-250-8-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-1-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-2-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-3-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-3-D5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-4-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-5-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-6-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-7-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-500-8-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
V-1000-1-D5								
V-1000-3-D5								
V-1000-5-D5								
V-1000-7-D5								
V-3000-1-D5								
V-3000-3-D5								
V-3000-5-D5								
V-3000-7-D5								
V-3000-7-D5	Lab Dup.							
V-15000-1-D5								
V-15000-3-D5								
V-15000-5-D5								
V-15000-7-D5								
V-20000-4-D5								
V-20000-6-D5								
V-20000-6-D5	Lab Dup.							

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Venture Drill Site - Fall 2000

Unique station ID	Replicate ID	Perylene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
V-250-1-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-1-D5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-250-2-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-3-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-4-D5					
V-250-5-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-6-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-7-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-250-8-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-1-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-2-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-3-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-3-D5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
V-500-4-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-5-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-6-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-7-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-500-8-D5		< 0.05	< 0.05	< 0.05	< 0.05
V-1000-1-D5					
V-1000-3-D5					
V-1000-5-D5					
V-1000-7-D5					
V-3000-1-D5					
V-3000-3-D5					
V-3000-5-D5					
V-3000-7-D5					
V-3000-7-D5	Lab Dup.				
V-15000-1-D5					
V-15000-3-D5					
V-15000-5-D5					
V-15000-7-D5					
V-20000-4-D5					
V-20000-6-D5					
V-20000-6-D5	Lab Dup.				

TABLE 4b: Sediment Quality at Venture Drill Site - Fall 2000

Unique station id	Replicate id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
V-250-1-D5		0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	18	20
V-250-1-D5	Lab Dup.	0.2	0.2	< 0.1	< 0.1	99	0.1	0.9	15	20
V-250-2-D5		0.2	0.2	< 0.1	< 0.1	99	0.1	0.9	19	20
V-250-3-D5		0.2	0.2	< 0.1	< 0.1	98.8	0.4	0.9	18	
V-250-4-D5										20
V-250-5-D5		0.3	0.2	0.1	< 0.1	99	0.1	0.9	18	19
V-250-6-D5		0.2	0.2	< 0.1	< 0.1	99.1	0.1	0.9	19	
V-250-7-D5		0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	18	20
V-250-8-D5		0.3	0.2	0.1	< 0.1	99.2	0.1	0.8	18	25
V-500-1-D5		0.2	0.2	< 0.1	< 0.1	99	0.2	0.8	18	19
V-500-2-D5		0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	18	18.5
V-500-3-D5		0.2	0.2	< 0.1	0.2	98.8	0.2	0.9	18	
V-500-3-D5	Lab Dup.	0.2	0.2	< 0.1	< 0.1	98.9	0.1	1	18	
V-500-4-D5		0.2	0.2	< 0.1	0.1	99	0.1	0.8	18	25
V-500-5-D5		0.2	0.2	< 0.1	< 0.1	99.1	0.1	0.8	17	25
V-500-6-D5		0.2	0.2	< 0.1	< 0.1	99	0.1	0.8	18	25
V-500-7-D5		0.3	0.2	0.1	< 0.1	98.9	0.3	0.7	16	25
V-500-8-D5		0.3	0.2	0.1	< 0.1	99.1	< 0.1	0.8	18	20
V-1000-1-D5		0.3	0.2	0.1	< 0.1	99.1	0.1	0.8	17	22
V-1000-3-D5		0.2	0.2	< 0.1	< 0.1	99.1	0.1	0.8	18	17
V-1000-5-D5		0.3	0.2	0.1	< 0.1	99.1	< 0.1	0.9	20	19
V-1000-7-D5		0.3	0.2	0.1	< 0.1	99.1	< 0.1	0.8	18	20
V-3000-1-D5		0.2	0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	17	15
V-3000-3-D5		0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	19	22
V-3000-5-D5		0.3	0.3	< 0.1	< 0.1	99.1	< 0.1	0.9	18	
V-3000-7-D5		0.2	0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	17	20-25
V-3000-7-D5	Lab Dup.	0.2	0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	16	
V-15000-1-D5		0.9	0.7	0.2	8.3	90.2	0.3	1.2	18	89
V-15000-3-D5		3.5	2.7	0.8	< 0.1	94	2.7	3.3	27	98
V-15000-5-D5		0.8	0.6	0.2	< 0.1	99	< 0.1	1	20	
V-15000-7-D5		0.3	0.2	0.1	0.2	99.2	0.2	0.4	17	25
V-20000-4-D5		0.3	0.3	< 0.1	< 0.1	99.4	0.2	0.4	18	42
V-20000-6-D5		1.4	1.1	0.3	< 0.1	98.7	0.4	0.9	19	45
V-20000-6-D5	Lab Dup.	1.4	1.1	0.3	< 0.1	98.7	0.4	0.9	19	45

TABLE 5b: Toxicity at Venture Drill Site - Fall 2000

Unique station ID	Replicate ID	Amphipod Survival Mortality %	Microtox EC50
V-250-1-D5		13	>98684
V-250-1-D5	Lab Dup.		
V-250-2-D5		6	>98684
V-250-3-D5		12	>98684
V-250-4-D5		10	>98684
V-250-5-D5		10	>98684
V-250-6-D5		11	>98684
V-250-7-D5		8	>98684
V-250-8-D5		15	>98684
V-500-1-D5		9	>98684
V-500-2-D5		12	>98684
V-500-3-D5		18	>98684
V-500-3-D5	Lab Dup.		
V-500-4-D5		15	>98684
V-500-5-D5		13	>98684
V-500-6-D5		11	>98684
V-500-7-D5		12	>98684
V-500-8-D5		15	>98684
V-1000-1-D5		10	>98684
V-1000-3-D5		12	>98684
V-1000-5-D5		13	>98684
V-1000-7-D5		12	>98684
V-3000-1-D5			
V-3000-3-D5			
V-3000-5-D5			
V-3000-7-D5			
V-3000-7-D5	Lab Dup.		
V-15000-1-D5			
V-15000-3-D5			
V-15000-5-D5			
V-15000-7-D5			
V-20000-4-D5		5	>98684
V-20000-6-D5		2	>98684
V-20000-6-D5	Lab Dup.		

**Laboratory Analytical Data for Sediment
from Venture Field, June 2001**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Toxicity

TABLE 1a: Trace Elements at Venture Gas Field - Spring 2001

Unique_station_id	Replicate_id	Barium mg/kg	Sulphide mg/kg	Ammonia mg/kg
V-250-1		230	<20	1.15
V-250-3		260	<20	1.31
V-250-5		240	<20	0.49
V-250-5	Field Dup.	320	<20	2.66
V-250-7		330	<20	1.11
V-500-1		200	<20	1.18
V-500-3		280	<20	1.6
V-500-5		210	<20	1
V-500-7		140	<20	2.81
V-1000-1		230	<20	0.37
V-1000-3		230	<20	1.36
V-1000-5		190	<20	0.83
V-1000-7		220	<20	1.6
V-3000-1		130		
V-3000-3		220		
V-3000-5		230		
V-3000-7		180		
V-3000-7	Lab Dup.	150		
V-15000-1		140		
V-15000-3		440		
V-15000-5		280		
V-15000-7		130		
V-20000-3		180		
V-20000-7		280		

TABLE 2a: Petroleum Hydrocarbons at Venture Gas Field - Spring 2001

Unique station id	Replicate id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₂₀ mg/kg	C ₂₁ -C ₃₀ mg/kg	TEH (C ₁₁ -C ₃₀) mg/kg
V-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.04	0.308	<3.0
V-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.48	0.494	<3.0
V-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.84	0.595	5.24
V-250-5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.48	0.482	4.94
V-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	18.3	0.827	16.9
V-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.512	0.439	<3.0
V-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.524	0.415	<3.0
V-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.899	0.482	<3.0
V-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.18	0.435	3.61
V-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.317	<3.0
V-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.378	<3.0
V-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.427	0.378	<3.0
V-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.802	0.482	<3.0
V-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	<0.250	<3.0
V-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.388	<3.0
V-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.427	<3.0
V-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.417	<3.0
V-3000-7	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.482	<3.0
V-15000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.494	<3.0
V-15000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.829	<3.0
V-15000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.457	<3.0
V-15000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.396	<3.0
V-20000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.557	1.39	<3.0
V-20000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.250	0.525	<3.0

TABLE 3a: Toxicity at Venture Gas Field - Spring 2001

Unique_station_id	Replicate_id	Amphipod Survival - Mortality %
V-250-1		3
V-250-3		3
V-250-5		4
V-250-5	Field Dup.	
V-250-7		4
V-500-1		1
V-500-3		1
V-500-5		4
V-500-7		4
V-1000-1		6
V-1000-3		3
V-1000-5		5
V-1000-7		1

**Laboratory Analytical Data for Sediment
from Venture Field, July 2002**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Toxicity

TABLE 1a: Trace Elements at Venture Gas Field - Summer 2002

Unique_station_id	Replicate_id	Barium mg/kg	Sulphide mg/kg	Ammonia mg/kg
V-250-1		200	<20	0.3
V-250-3		260	23	0.49
V-250-5		260	<20	<0.3
V-250-7		200	24	0.54
V-500-1		140	<20	<0.3
V-500-3		200	31	<0.3
V-500-3	Field Dup.	220	26	0.31
V-500-5		170	28	<0.3
V-500-7		250	30	2.79
V-1000-1		150	53	<0.3
V-1000-3		200	34	0.37
V-1000-3	Lab Dup.	200	37	0.37
V-1000-5		200	53	3.05
V-1000-7		210	41	0.62
V-3000-1		110	<20	<0.3
V-3000-3		200	<20	2.9
V-3000-5		230	<20	0.3
V-3000-5	Field Dup.	220	<20	<0.3
V-3000-7		120	<20	<0.3
V-15000-1		160	<20	7.84
V-15000-3		390	<20	14.2
V-15000-5		290	<20	2.81
V-15000-5	Lab Dup.	280	<20	2.62
V-15000-7		140	68	0.48
V-20000-3		210	56	3.73
V-20000-7		300	120	7.56

TABLE 2a: Petroleum Hydrocarbons at Venture Gas Field - Summer 2002

Unique station id	Replicate id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	G ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₄ mg/kg	C ₁₅ -C ₂₀ mg/kg	TEH (C ₁₁ -C ₂₀) mg/kg
V-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.805	<0.25	
V-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	12	1.32	
V-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	10.4	<0.25	
V-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.89	<0.25	
V-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.323	<0.25	
V-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.28	<0.25	
V-500-3	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.21	<0.25	
V-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.321	<0.25	
V-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.51	0.323	
V-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.707	<0.25	
V-1000-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.852	<0.25	
V-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.963	0.728	
V-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	0.767	
V-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-3000-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-15000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	0.415	
V-15000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.772	0.554	
V-15000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	0.318	
V-15000-5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-15000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	<0.25	
V-20000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.689	1.08	
V-20000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	<0.25	0.45	

TABLE 3a: Toxicity at Venture Gas Field - Summer 2002

Unique_station_id	Replicate_id	Amphipod Survival Mortality %
V-250-1		5
V-250-3		5
V-250-5		2
V-250-7		4
V-500-1		12
V-500-3		4
V-500-5		7
V-500-7		4
V-1000-1		5
V-1000-3		14
V-1000-5		4
V-1000-7		4

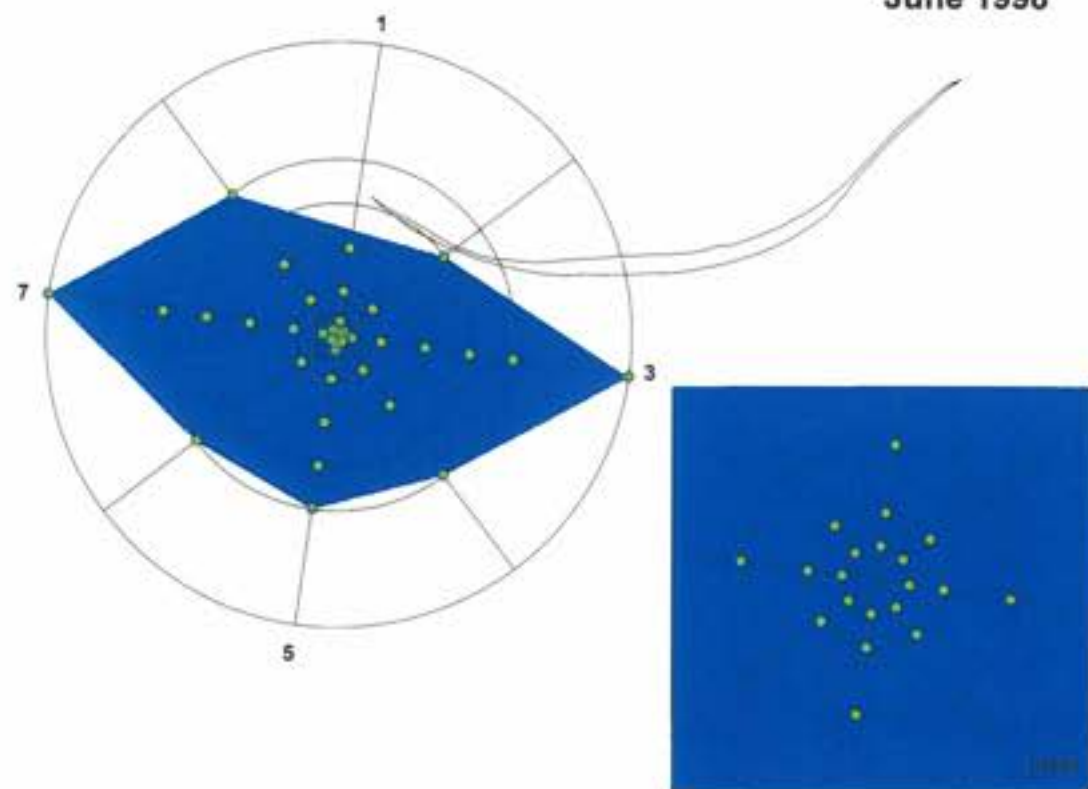
Laboratory Analytical Results from Sediment from Thebaud Field

- June 1998 Data
- June 1999 Data
- November 1999 Data
- June 2000 Data
- November 2000 Data
- June 2001 Data

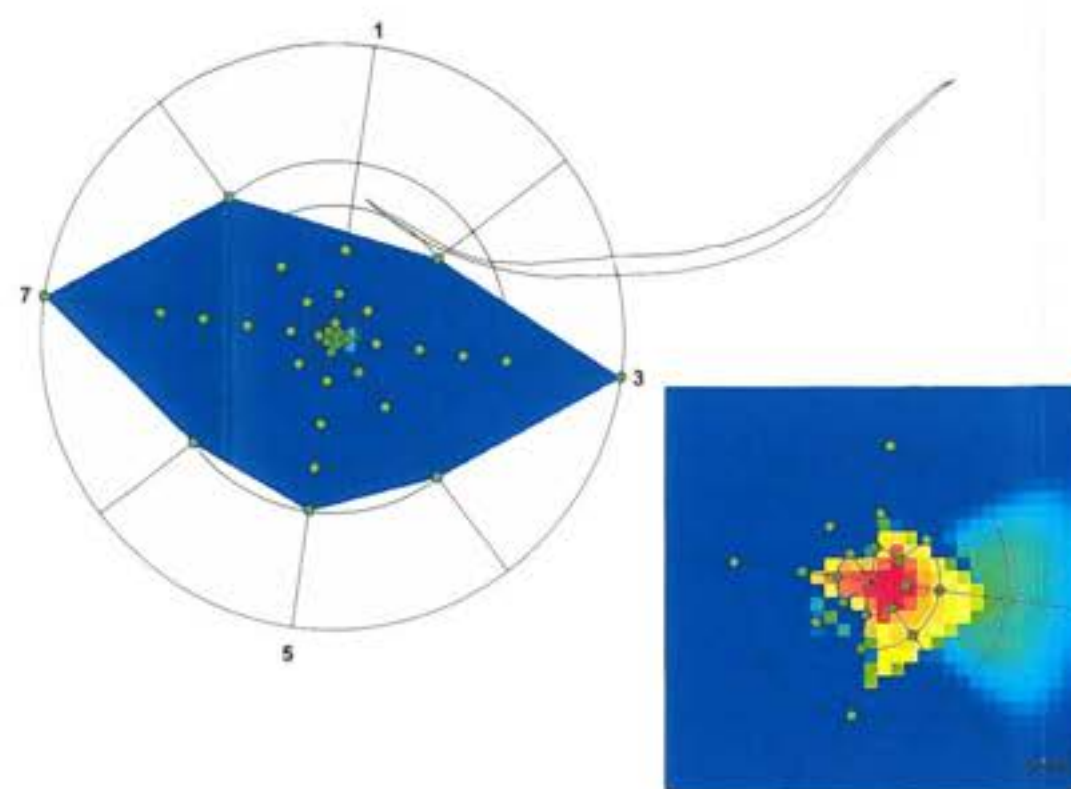
**Laboratory Analytical Results
for Sediment from Thebaud Field, June 1998**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

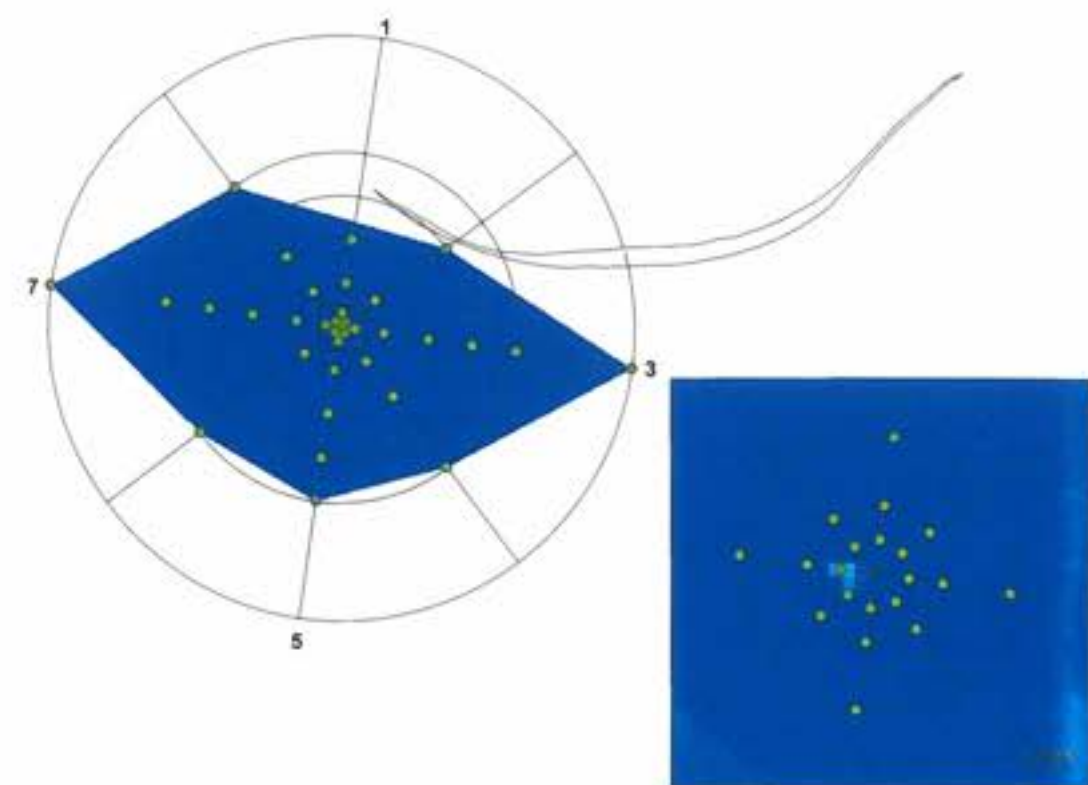
Baseline
June 1998



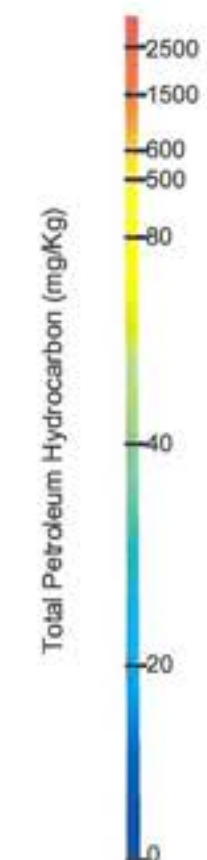
June 1999



Nov. 1999



LEGEND



● Sample Locations

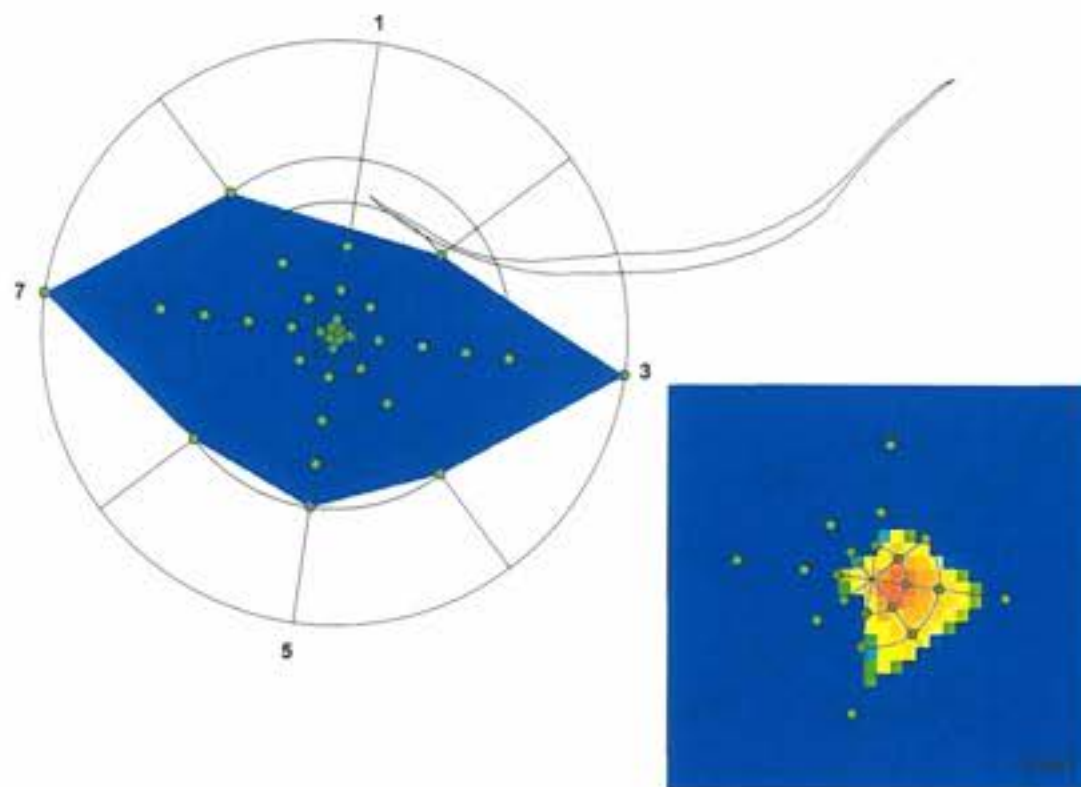
Appendix B (1 of 2) TOTAL PETROLEUM HYDROCARBONS IN SEDIMENT

Thebaud Well

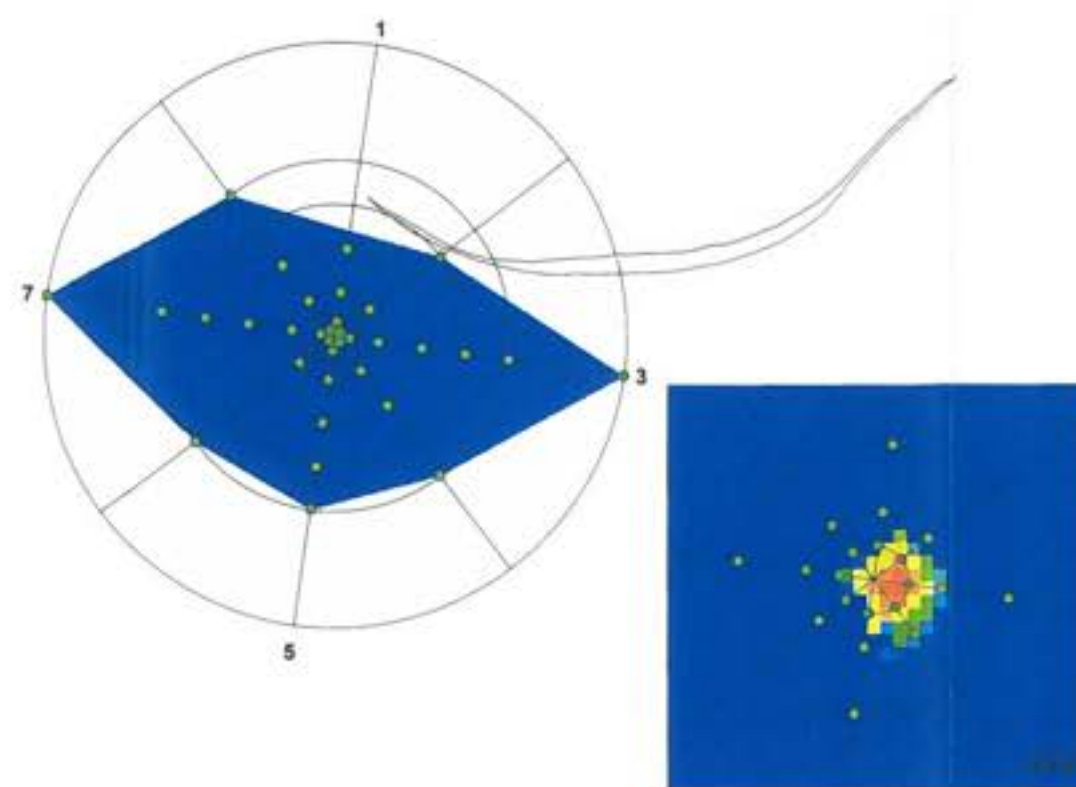


 Jacques Whitford
Environment Limited

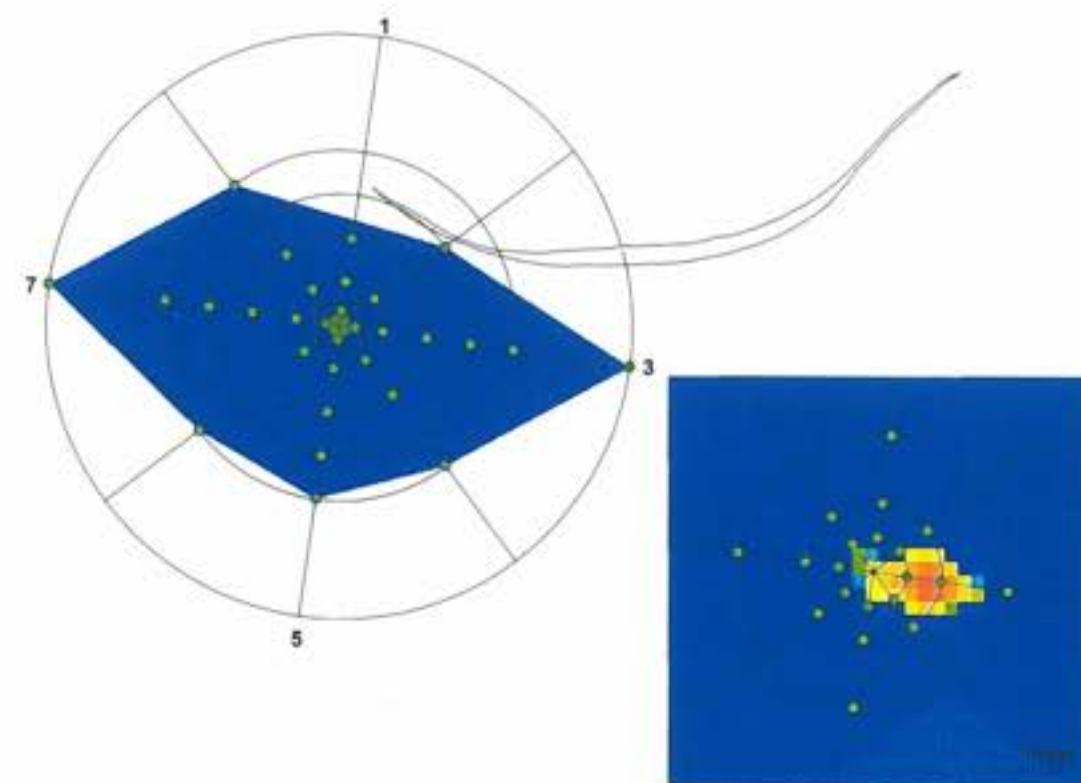
June 2000



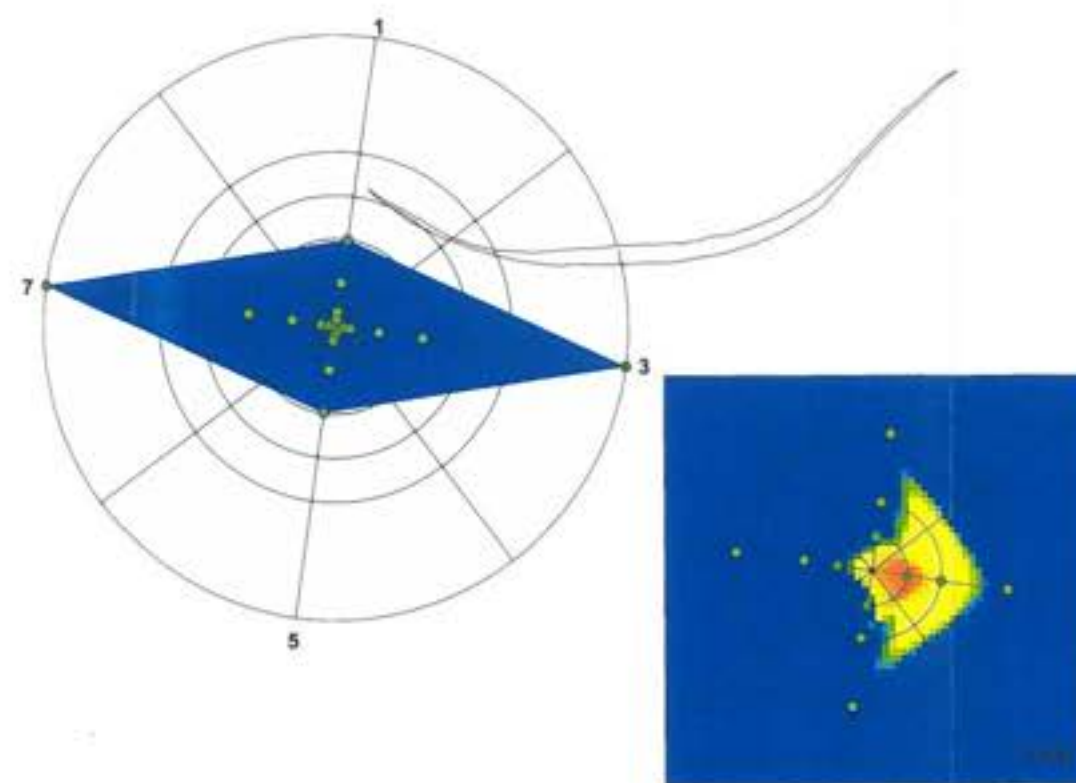
Nov. 2000



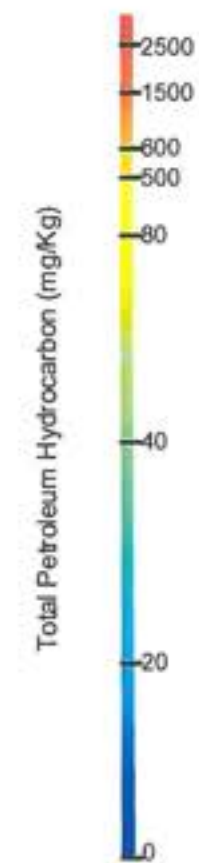
July 2001



July 2002



LEGEND



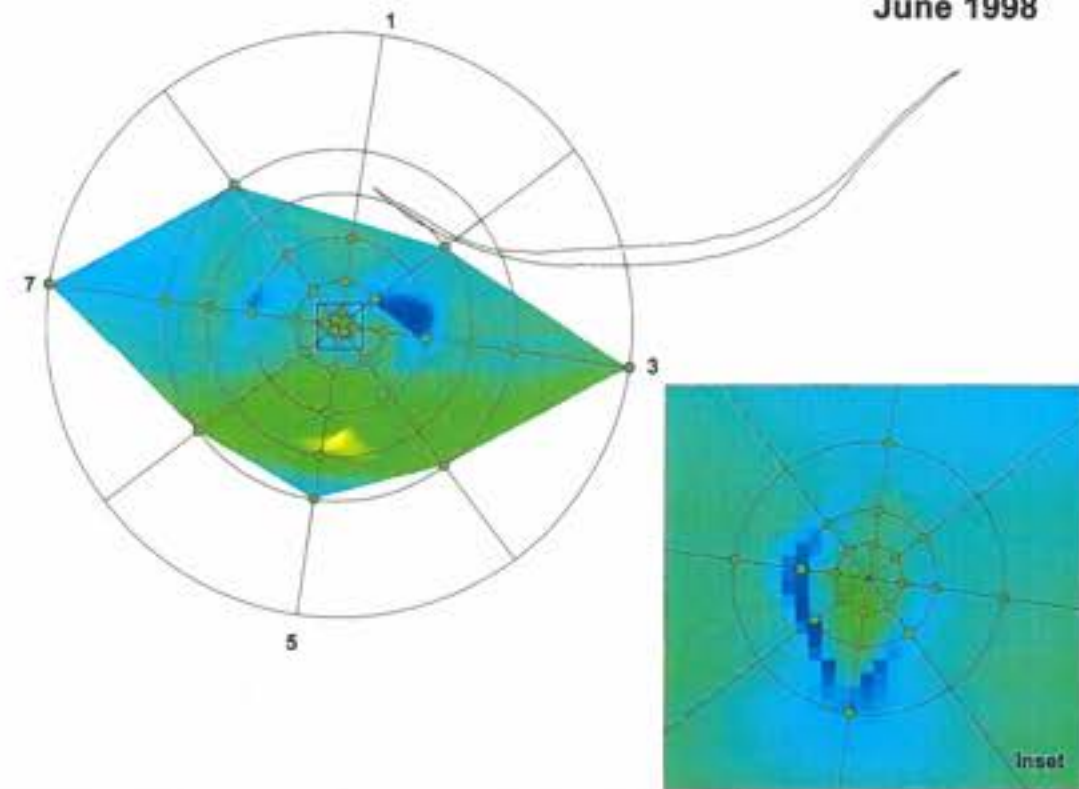
● Sample Locations

Appendix B (2 of 2) TOTAL PETROLEUM HYDROCARBONS IN SEDIMENT

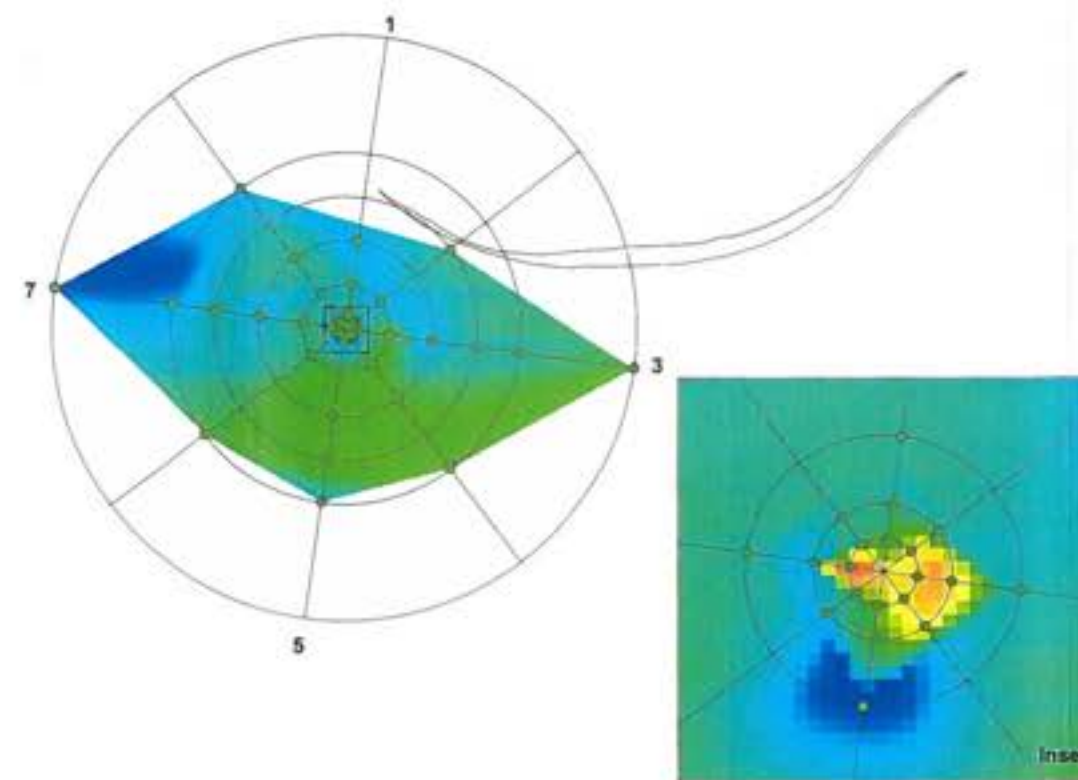
Thebaud Well



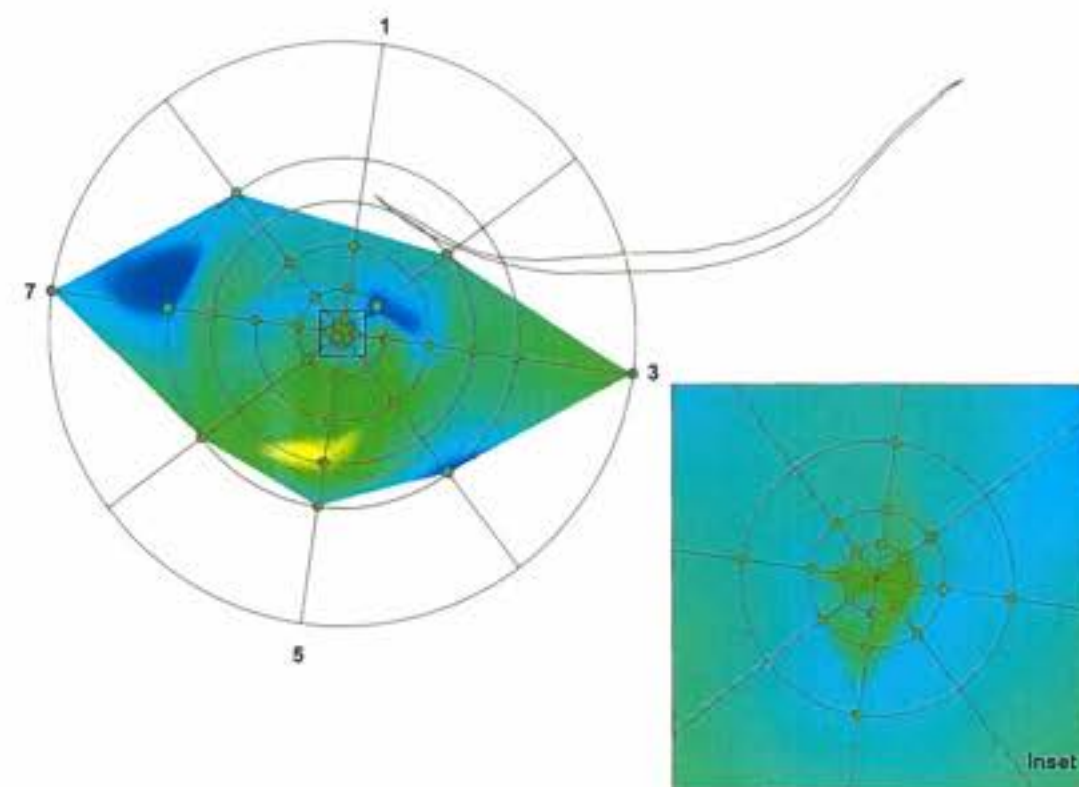
Baseline
June 1998



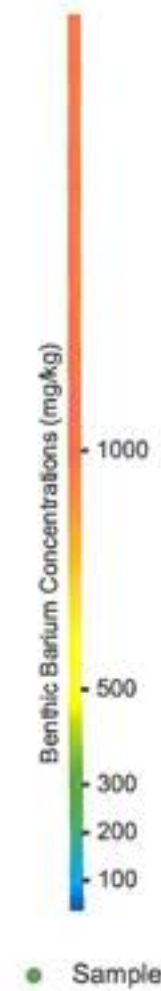
June 1999



Nov. 1999



LEGEND

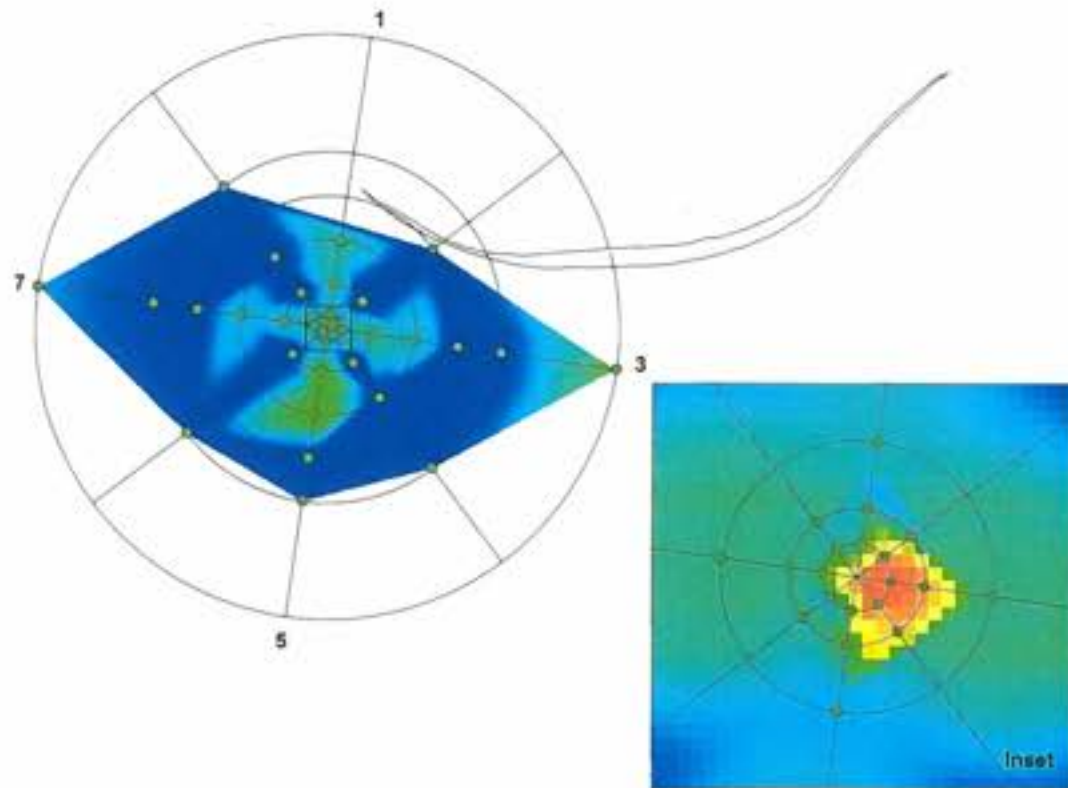


Appendix B (1 of 2) SEDIMENT BARIUM CONCENTRATIONS

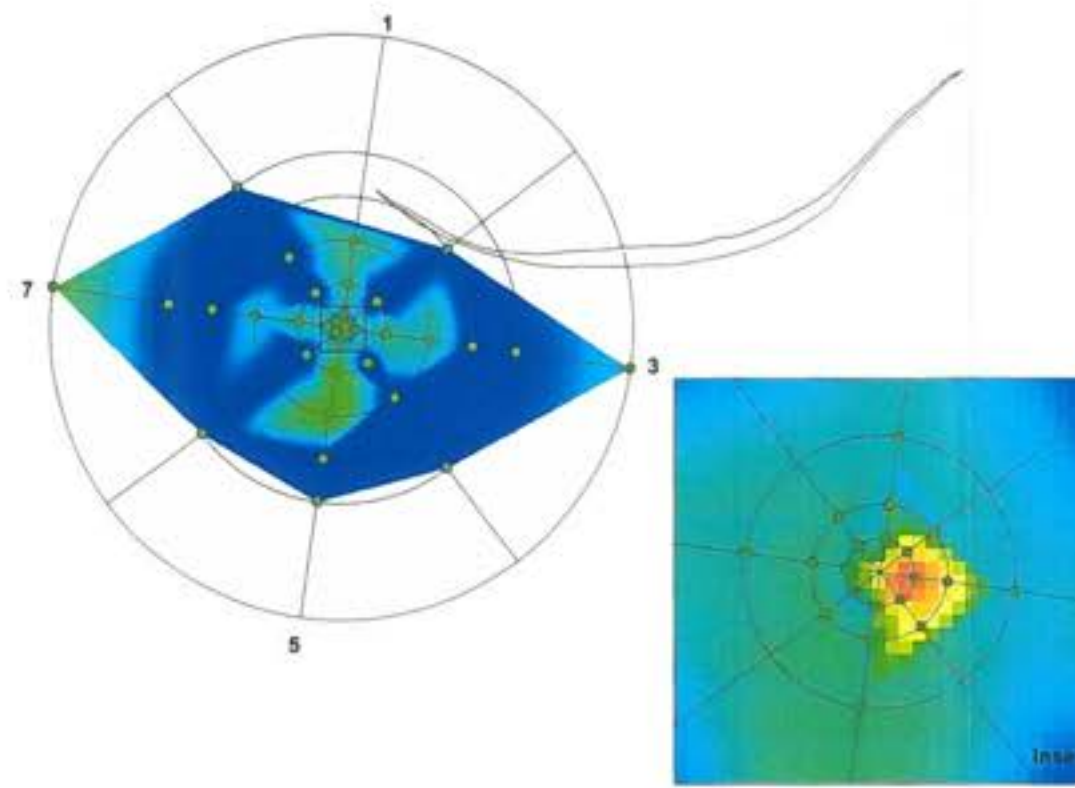
Thebaud Well



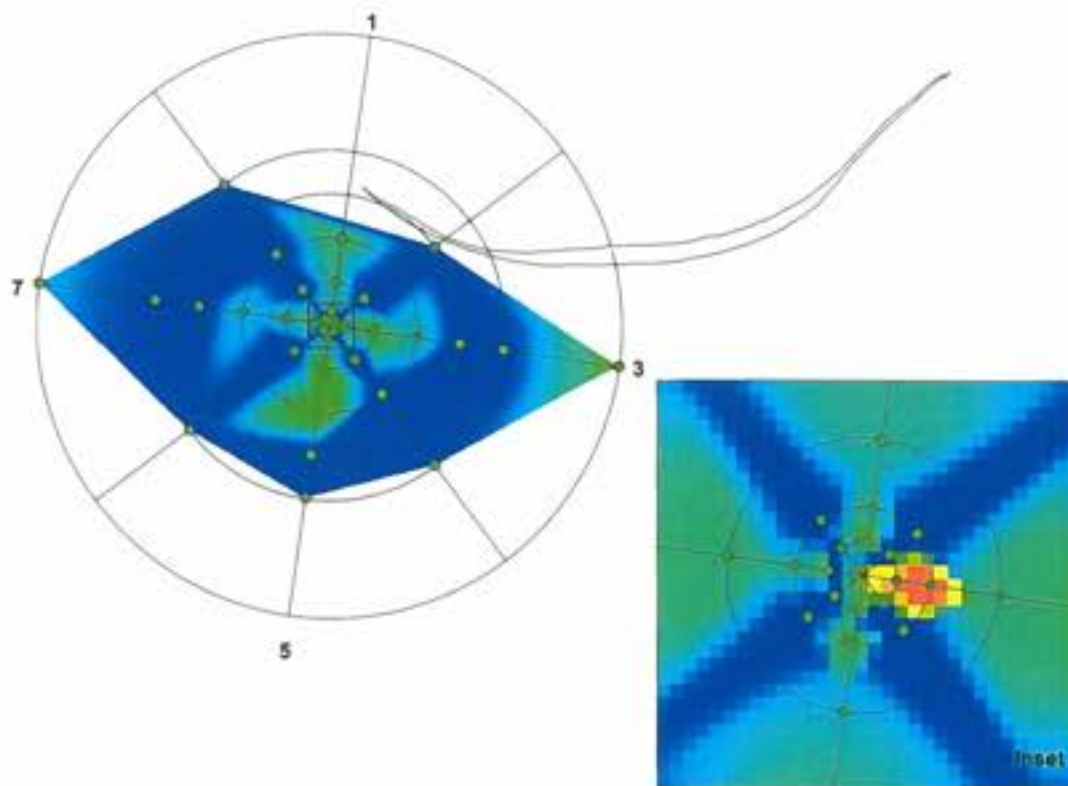
June 2000



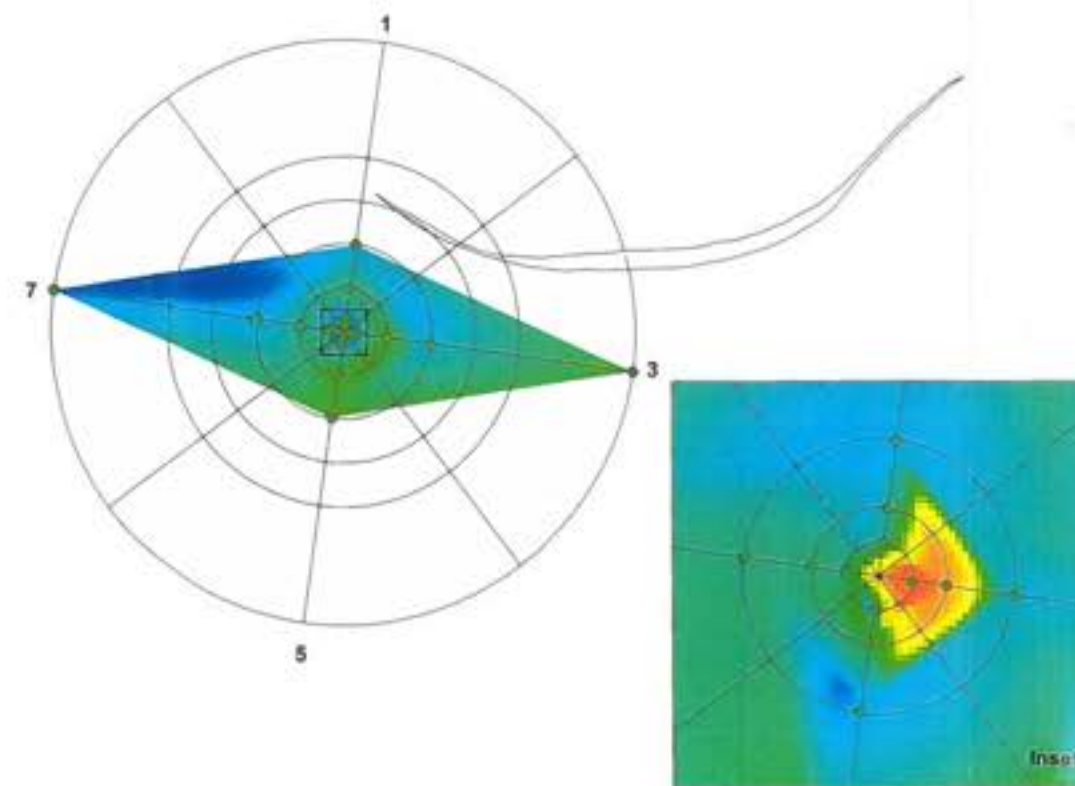
Nov. 2000



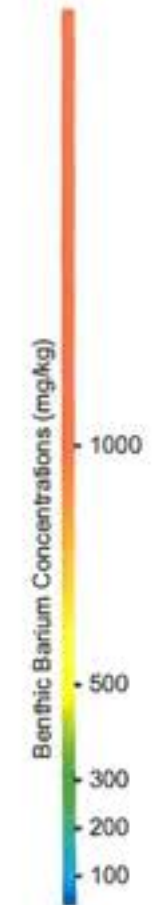
July 2001



July 2002



LEGEND



● Sample Locations

Appendix B (2 of 2) SEDIMENT BARIUM CONCENTRATIONS

Thebaud Well



**Jacques Whitford
Environment Limited**

TABLE 1a: Trace Elements at Thebaud Drill Site - June 1998

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg
T-250-1		12900	<2	2	210	<5	<5	<0.3	20	2	3	13200	8.30
T-250-3		12700	<2	2	200	<5	<5	<0.3	8	1	<2	6360	5.60
T-250-5		15500	<2	2	270	<5	<5	<0.3	11	1	<2	6300	6.80
T-250-7		13800	<2	2	230	<5	<5	<0.3	10	1	2	5200	6.10
T-500-1		12000	<2	2	180	<5	<5	<0.3	16	2	2	11100	8.80
T-500-3		7000	<2	<2	120	<5	<5	<0.3	2	<1	<2	1200	3.00
T-500-3	Lab Dup.	6110	<2	<2	94	<5	<5	<0.3	3	1	<2	2200	3.00
T-500-5		14700	<2	2	230	<5	<5	<0.3	10	1	2	6530	6.40
T-500-7		6320	<2	<2	89	<5	<5	<0.3	3	<1	<2	2000	2.50
T-1000-1		6110	<2	<2	120	<5	<5	<0.3	2	<1	<2	1300	2.50
T-1000-1	Lab Dup.	7070	<2	2	130	<5	<5	<0.3	4	<1	<2	2700	3.40
T-1000-3		8980	<2	2	170	<5	<5	<0.3	5	1	<2	3200	3.80
T-1000-5		6350	<2	<2	95	<5	<5	<0.3	4	<1	<2	2300	2.50
T-1000-7		11100	<2	<2	200	<5	<5	<0.3	7	1	<2	3600	4.90
T-3000-1		8180	<2	<2	150	<5	<5	<0.3	5	1	<2	2800	3.80
T-3000-2		5930	<2	<2	92	<5	<5	<0.3	3	<1	<2	1600	2.30
T-3000-3		14800	<2	2	220	<5	<5	<0.3	9	1	<2	6290	6.30
T-3000-4		15900	<2	2	230	<5	<5	<0.3	21	3	3	16700	8.50
T-3000-5		17100	<2	3	260	<5	<5	<0.3	8	1	<2	5440	6.50
T-3000-6		15700	<2	3	240	<5	<5	<0.3	11	1	<2	6610	7.00
T-3000-7		8500	<2	<2	160	<5	<5	<0.3	5	1	<2	2800	4.00
T-3000-8		6790	<2	<2	120	<5	<5	<0.3	3	<1	<2	1700	2.70
T-6000-1		9610	<2	<2	190	<5	<5	<0.3	7	1	<2	4100	5.30
T-6000-3		5900	<2	<2	95	<5	<5	<0.3	2	<1	<2	1300	2.20
T-6000-4		18000	<2	3	250	<5	<5	<0.3	13	2	3	7610	7.30
T-6000-5		18500	<2	3	280	<5	<5	<0.3	11	1	2	6610	7.60
T-6000-7		6080	<2	<2	100	<5	<5	<0.3	2	1	<2	1900	2.60
T-6000-7	Field Dup.	5000	<2	2	85	<5	<5	<0.3	3	1	<2	2000	2.30
T-6000-8		8170	<2	2	130	<5	<5	<0.3	6	1	<2	3100	3.60
T-9000-2		6890	<2	<2	140	<5	<5	<0.3	3	<1	<2	1700	3.10
T-9000-2	Lab Dup.	7570	<2	<2	140	<5	<5	<0.3	3	<1	<2	1900	3.50
T-9000-3		13000	<2	<2	210	<5	<5	<0.3	6	1	<2	2900	4.80
T-9000-5		21200	<2	3	300	<5	<5	<0.3	13	2	2	8340	8.20
T-9000-7		10100	<2	3	170	<5	<5	<0.3	6	1	<2	4000	4.30
T-9000-7	Field Dup.	10000	<2	3	160	<5	<5	<0.3	5	1	<2	4000	4.00
T-12000-3		13600	<2	2	200	<5	<5	<0.3	12	2	2	7570	6.60
T-12000-3	Lab Dup.	13400	<2	<2	200	<5	<5	<0.3	11	1	2	6380	6.30
T-12000-4		22900	<2	3	300	<5	<5	<0.3	15	2	2	10000	8.80
T-12000-5		7020	<2	<2	100	<5	<5	<0.3	2	<1	<2	1000	3.00
T-12000-6		17300	<2	3	260	<5	<5	<0.3	11	1	2	6730	7.40
T-12000-6	Field Dup.	16800	<2	3	250	<5	<5	<0.3	10	1	2	6640	7.20
T-12000-7		6980	<2	3	110	<5	<5	<0.3	6	1	<2	4300	3.30
T-12000-8		5880	<2	<2	130	<5	<5	<0.3	2	<1	<2	1600	4.10
T-12000-8	Lab Dup.	6610	<2	<2	130	<5	<5	<0.3	2	<1	<2	1800	3.30
T-20000-3		18600	<2	2	260	<5	<5	<0.3	14	2	2	8720	7.30
T-20000-7		3500	<2	<2	110	<5	<5	<0.3	3	<1	<2	1500	2.10
T-20000-7	Field Dup.	5840	<2	2	93	<5	<5	<0.3	4	<1	<2	2800	2.60

TABLE 1a: Trace Elements at Thebaud Drill Site - June 1998 (Continued)

Unique_station_id	Replicate_id	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Srortium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
T-250-1		<5	400	<2	<0.01	3.00	<2	51	0.10	<2	0.70	27	20
T-250-3		<5	130	<2	<0.01	2.00	<2	46	0.20	<2	0.30	13	10
T-250-5		<5	120	<2	<0.01	3.00	<2	60	0.10	<2	0.40	15	12
T-250-7		<5	120	<2	0.01	<2	<2	57	0.10	<2	0.4	14	12
T-500-1		<5	350	<2	0.01	3.00	<2	51	0.10	<2	0.60	25	18
T-500-3		<5	12	<2	<0.01	<2	<2	28	0.10	<2	0.20	3	7
T-500-3	Lab Dup.	<5	17	<2	<0.01	<2	<2	24	0.10	<2	0.20	5	7
T-500-5		<5	130	<2	0.01	2.00	<2	58	0.10	<2	0.30	15	12
T-500-7		<5	21	<2	<0.01	<2	<2	25	0.10	<2	0.10	4	5
T-1000-1		<5	11	<2	<0.01	<2	<2	26	0.10	<2	0.10	3	5
T-1000-1	Lab Dup.	<5	27	<2	<0.01	<2	<2	28	0.10	<2	0.20	6	7
T-1000-3		<5	28	<2	<0.01	2.00	<2	36	0.10	<2	0.20	7	8
T-1000-5		<5	26	<2	<0.01	<2	<2	30	0.10	<2	0.10	5	7
T-1000-7		<5	58	<2	0.01	2.00	<2	47	0.10	<2	0.20	9	8
T-3000-1		<5	52	<2	<0.01	<2	<2	32	0.10	<2	0.20	7	8
T-3000-2		<5	12	<2	<0.01	<2	<2	22	0.10	<2	0.10	4	7
T-3000-3		<5	140	<2	<0.01	2.00	<2	60	0.20	<2	0.40	13	11
T-3000-4		<5	520	<2	<0.01	4.00	<2	61	0.10	<2	0.80	37	26
T-3000-5		<5	66	<2	<0.01	2.00	<2	65	0.20	<2	0.30	11	10
T-3000-6		<5	120	<2	<0.01	2.00	<2	63	0.20	<2	0.40	15	12
T-3000-7		<5	50	<2	<0.01	<2	<2	35	0.10	<2	0.20	7	8
T-3000-8		<5	16	<2	<0.01	<2	<2	28	0.10	<2	0.10	4	7
T-6000-1		<5	110	<2	<0.01	2.00	<2	41	0.10	<2	0.30	10	11
T-6000-3		<5	14	<2	<0.01	<2	<2	28	0.10	<2	0.10	3	5
T-6000-4		<5	170	<2	<0.01	3.00	<2	71	0.20	<2	0.50	16	13
T-6000-5		<5	120	<2	<0.01	3.00	<2	75	0.20	<2	0.40	15	13
T-6000-7		<5	16	<2	<0.01	<2	<2	23	0.10	<2	0.10	4	6
T-6000-7	Field Dup.	<5	17	<2	<0.01	<2	<2	22	0.10	<2	0.40	6	6
T-6000-8		<5	35	<2	<0.01	2.00	<2	37	0.10	<2	0.20	8	9
T-9000-2		<5	26	<2	<0.01	<2	<2	31	0.10	<2	0.10	4	6
T-9000-2	Lab Dup.	<5	43	<2	<0.01	<2	<2	34	0.10	<2	0.20	5	7
T-9000-3		<5	33	<2	<0.01	2.00	<2	52	0.20	<2	0.20	6	6
T-9000-5		<5	220	<2	<0.01	3.00	<2	79	0.30	<2	0.60	18	16
T-9000-7		<5	47	<2	<0.01	2.00	<2	39	0.10	<2	0.30	9	9
T-9000-7	Field Dup.	<5	36	<2	<0.01	2.00	<2	39	0.10	<2	0.20	9	9
T-12000-3		<5	230	<2	<0.01	2.00	<2	58	0.10	<2	0.40	16	13
T-12000-3	Lab Dup.	<5	170	<2	<0.01	2.00	<2	54	0.10	<2	0.40	13	12
T-12000-4		<5	280	<2	<0.01	4.00	<2	80	0.30	<2	0.80	19	17
T-12000-5		<5	36	<2	<0.01	<2	<2	28	0.10	<2	0.20	3	6
T-12000-6		<5	150	<2	<0.01	3.00	<2	71	0.20	<2	0.50	15	13
T-12000-6	Field Dup.	<5	150	<2	<0.01	3.00	<2	68	0.20	<2	0.40	14	12
T-12000-7		<5	52	<2	<0.01	2.00	<2	35	0.10	<2	0.20	11	7
T-12000-8		<5	16	<2	<0.01	<2	<2	29	0.10	<2	0.20	4	7
T-12000-8	Lab Dup.	<5	25	<2	<0.01	<2	<2	32	0.10	<2	0.20	4	7
T-20000-3		<5	250	<2	<0.01	3.00	<2	71	0.20	<2	0.50	18	15
T-20000-7		<5	12	<2	<0.01	<2	<2	21	0.10	<2	0.10	4	6
T-20000-7	Field Dup.	<5	20	<2	<0.01	<2	<2	27	0.10	<2	0.40	6	7

TABLE 3a: Polycyclic Aromatic Hydrocarbons at Thebaud Drill Site - June 1998 (Continued)

Unique station id	Replicate id	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
T-250-1		<0.05	<0.05	<0.05
T-250-3		<0.05	<0.05	<0.05
T-250-5		<0.05	<0.05	<0.05
T-250-7		<0.05	<0.05	<0.05
T-500-1		<0.05	<0.05	<0.05
T-500-3		<0.05	<0.05	<0.05
T-500-5	Lab Dup.	<0.05	<0.05	<0.05
T-500-7		<0.05	<0.05	<0.05
T-1000-1		<0.05	<0.05	<0.05
T-1000-3	Lab Dup.	<0.05	<0.05	<0.05
T-1000-5		<0.05	<0.05	<0.05
T-1000-7		<0.05	<0.05	<0.05
T-3000-1		<0.05	<0.05	<0.05
T-3000-2		<0.05	<0.05	<0.05
T-3000-3		<0.05	<0.05	<0.05
T-3000-4		<0.05	<0.05	<0.05
T-3000-5		<0.05	<0.05	<0.05
T-3000-6		<0.05	<0.05	<0.05
T-3000-7		<0.05	<0.05	<0.05
T-3000-8		<0.05	<0.05	<0.05
T-6000-1		<0.05	<0.05	<0.05
T-6000-3		<0.05	<0.05	<0.05
T-6000-4		<0.05	<0.05	<0.05
T-6000-5		<0.05	<0.05	<0.05
T-6000-7		<0.05	<0.05	<0.05
T-6000-8	Field Dup.	<0.05	<0.05	<0.05
T-9000-2		<0.05	<0.05	<0.05
T-9000-3	Lab Dup.	<0.05	<0.05	<0.05
T-9000-5		<0.05	<0.05	<0.05
T-9000-7		<0.05	<0.05	<0.05
T-9000-8	Field Dup.	<0.05	<0.05	<0.05
T-12000-3		<0.05	<0.05	<0.05
T-12000-4	Lab Dup.	<0.05	<0.05	<0.05
T-12000-5		<0.05	<0.05	<0.05
T-12000-6		<0.05	<0.05	<0.05
T-12000-7	Field Dup.	<0.05	<0.05	<0.05
T-12000-8		<0.05	<0.05	<0.05
T-12000-8	Lab Dup.	<0.05	<0.05	<0.05
T-20000-3		<0.05	<0.05	<0.05
T-20000-7		<0.05	<0.05	<0.05
T-20000-7	Field Dup.	<0.05	<0.05	<0.05

TABLE 4a: Sediment Quality at Thebaud Drill Site - June 1998

Uniquet_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
T-250-1		<0.10	0.40	<0.1	98.9	<0.1	1	0.0005273	<0.3
T-250-3		<0.10	0.30	<0.1	98.9	0.1	1	0.0002	<0.3
T-250-5		<0.10	0.40	<0.1	98.8	0.1	1.1	0.0022	1.72
T-250-7		0.30	<0.1	<0.1	98.9	0.1	0.9	lost	<0.3
T-500-1		<0.10	0.40	<0.1	99	<0.1	1	0.0001667	<0.3
T-500-3		0.10	0.40	<0.1	99.1	<0.1	0.8	0.0010105	<0.3
T-500-5	Lab Dup.	0.10	0.40	<0.1	99.1	<0.1	0.8		
T-500-7		<0.10	0.40	<0.1	98.8	0.2	1	0.0003	<0.3
T-1000-1		<0.10	0.20	0.7	98.3	<0.1	0.7	0.0007	<0.3
T-1000-3		<0.10	0.20	0.2	99	<0.1	0.8	0.0005	<0.3
T-1000-5	Lab Dup.	<0.10	0.20	0.2	99	<0.1	0.8		
T-1000-7		<0.10	0.30	<0.1	99	<0.1	1	0.0001	<0.3
T-3000-1		<0.10	0.20	2.3	97	<0.1	0.7	0.0004	<0.3
T-3000-3		0.10	0.50	<0.1	99	<0.1	1	0.0003	<0.3
T-3000-5		0.10	0.20	<0.1	99.1	<0.1	1.2	0.0004	0.83
T-3000-7		0.10	0.20	0.1	99	<0.1	1.3	0.0009	<0.3
T-3000-9		<0.10	0.30	<0.1	98.8	0.1	1.1	0.0004	<0.3
T-3000-11		<0.10	0.40	<0.1	98.9	0.1	1	0.0007	<0.3
T-3000-13		0.10	0.40	<0.1	98.4	0.1	1.8	lost	<0.3
T-3000-15		<0.10	0.40	<0.1	98.9	0.1	0.9	0.0012	<0.3
T-3000-17		<0.10	0.20	<0.1	99.2	0.1	0.7	0.0003	<0.3
T-3000-19		0.10	0.10	0.2	98.9	<0.1	0.9	0.2569	0.89
T-6000-1		0.10	0.20	<0.1	99.1	<0.1	0.9	0.0006	0.81
T-6000-3		<0.10	0.30	<0.1	99	0.1	0.9	0.0005	<0.3
T-6000-5		0.40	0.40	<0.1	98.6	0.3	1.2	0.0004	<0.3
T-6000-7		0.30	0.50	<0.1	98.2	0.2	1.6		0.59
T-6000-9		0.10	0.20	0.2	99.1	<0.1	0.7	0.0019	<0.3
T-6000-11	Field Dup.	0.10	0.10	0.2	99.2	<0.1	0.7		
T-6000-13		0.20	0.20	<0.1	99.1	<0.1	1	0.0024	<0.3
T-9000-1		0.10	0.20	<0.1	99.4	<0.1	0.7	0.0023	<0.3
T-9000-3	Lab Dup.	0.10	0.20	0.1	99.3	0.1	0.6		
T-9000-5		0.10	0.30	<0.1	98.9	<0.1	1.1	0.0004	<0.3
T-9000-7		0.30	0.50	<0.1	98.5	0.1	1.5	0.0003	0.36
T-9000-9		0.10	0.20	<0.1	99.3	<0.1	0.7	0.0004	0.85
T-9000-11	Field Dup.	0.20	0.20	<0.1	99.3	<0.1	0.7		
T-12000-1		0.10	0.40	<0.1	98.9	0.1	1	0.0001	<0.3
T-12000-3	Lab Dup.	0.1	0.40	<0.1	98.9	0.1	1		
T-12000-5		1.00	0.70	<0.1	97.1	1.1	1.8		<0.3
T-12000-7		0.20	0.30	<0.1	99	0.1	0.9	0.0009	<0.3
T-12000-9		0.30	0.40	<0.1	98.3	0.1	1.6	0.0023	0.61
T-12000-11	Field Dup.	0.20	0.40	<0.1	98.6	<0.1	1.5		
T-12000-13		0.30	0.20	<0.1	99.1	<0.1	1.1	0.0029	0.61
T-12000-15		0.10	0.20	0.1	98.8	<0.1	1.1	0.0002	<0.3
T-12000-17	Lab Dup.	0.10	0.20	<0.1	99.1	<0.1	1.2	0.0032	2.40
T-20000-1		0.40	0.60	<0.1	98.4	0.2	1.4	0.0004	<0.3
T-20000-3		0.10	0.20	3.4	95.7	<0.1	0.9	0.0024	0.50
T-20000-5	Field Dup.	0.30	0.30	0.8	97.9	0.2	1		

TABLE 5a: Toxicity at Thebaud Drill Site - June 1998

Unique station id	Replicate id	Amphipod Mortality %	Survival Control Mortality %	Embroid Fertilization % Fertilization	Microtox EC50
T-250-1		14	1	49.3	>100%
T-250-3		9	1	25	>100%
T-250-5		4	1	46.3	>100%
T-250-7		2	1	57.3	>100%
T-500-1					
T-500-3					
T-500-5	Lab Dup.				
T-500-7					
T-1000-1					
T-1000-3	Lab Dup.				
T-1000-5					
T-1000-7					
T-3000-1		6	2	91.5	>100%
T-3000-2					
T-3000-3		0	1	46	>100%
T-3000-4					
T-3000-5		4	2	90.3	>100%
T-3000-6					
T-3000-7		1	2	92.5	>100%
T-3000-8					
T-6000-1					
T-6000-3					
T-6000-4					
T-6000-5					
T-6000-7					
T-6000-7	Field Dup.				
T-6000-8					
T-9000-2					
T-9000-2	Lab Dup.				
T-9000-3					
T-9000-5					
T-9000-7					
T-9000-7	Field Dup.				
T-12000-3					
T-12000-3	Lab Dup.				
T-12000-4					
T-12000-5					
T-12000-6					
T-12000-6	Field Dup.				
T-12000-7					
T-12000-8					
T-12000-8	Lab Dup.				
T-20000-3		4	1	0	>100%
T-20000-7		4	2	84.5	>100%
T-20000-7	Field Dup.				

**Laboratory Analytical Results
for Sediment from Thebaud Field, June 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at Thebaud Drill Site - June 1999

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg
T-250-1		11000	<2	<2	260	<5	<5	<0.3	17	2	3	12000	7.1
T-250-1	Lab Dup.	11000	<2	2	240	<5	<5	<0.3	14	2	2	7800	5.8
T-250-3		13000	<2	2	610	<5	<5	<0.3	8	1	<2	3900	5.6
T-250-5		14000	<2	2	300	<5	<5	<0.3	12	2	<2	7200	6.6
T-250-7		10000	<2	<2	760	<5	<5	<0.3	6	1	<2	2800	4.4
T-500-1		9900	<2	2	190	<5	<5	<0.3	10	1	<2	4500	5.1
T-500-1	Field Dup.	11000	<2	2	220	<5	<5	<0.3	7	1	<2	3500	4.6
T-500-3		5100	<2	<2	650	<5	<5	<0.3	3	<1	<2	2300	2.7
T-500-5		15000	<2	3	260	<5	<5	<0.3	14	2	2	9500	7.2
T-500-7		6600	<2	2	120	<5	<5	<0.3	4	<1	<2	2200	2.9
T-1000-1		7300	<2	<2	180	<5	<5	<0.3	4	<1	<2	2000	3.1
T-1000-3		7200	<2	2	150	<5	<5	<0.3	4	<1	<2	2200	3.1
T-1000-5		4900	<2	<2	80	<5	<5	<0.3	2	<1	<2	1500	2.2
T-1000-7		9300	<2	2	180	<5	<5	<0.3	6	1	<2	3700	4.3
T-1000-7	Field Dup.	7900	<2	2	170	<5	<5	<0.3	4	<1	<2	2300	3.3
T-3000-1		7500	<2	2	140	<5	<5	<0.3	9	1	<2	4200	4.3
T-3000-2		5600	<2	<2	110	<5	<5	<0.3	4	<1	<2	2400	2.5
T-3000-3		14000	<2	2	240	<5	<5	<0.3	9	1	<2	4600	5.7
T-3000-4		16000	<2	3	280	<5	<5	<0.3	13	2	<2	6800	7
T-3000-5		15000	<2	3	270	<5	<5	<0.3	10	1	<2	5200	6.2
T-3000-6		15000	<2	3	240	<5	<5	<0.3	11	2	2	7600	6.4
T-3000-6	Lab Dup.	15000	<2	3	240	<5	<5	<0.3	11	1	<2	6100	6.3
T-3000-6	Field Dup.	14000	<2	3	230	<5	<5	<0.3	10	1	<2	5400	5.7
T-3000-7		8800	<2	2	180	<5	<5	<0.3	5	1	<2	2900	3.6
T-3000-8		6600	<2	2	140	<5	<5	<0.3	4	<1	<2	2500	2.6
T-6000-1		4600	<2	<2	100	<5	<5	<0.3	2	<1	<2	1400	2.1
T-6000-3		6200	<2	<2	120	<5	<5	<0.3	4	<1	<2	1700	2.6
T-6000-4		16000	<2	3	250	<5	<5	<0.3	11	2	<2	6200	6.1
T-6000-5		18000	<2	4	300	<5	<5	<0.3	12	1	<2	5800	6.7
T-6000-7		6400	<2	3	120	<5	<5	<0.3	5	1	<2	3500	2.8
T-6000-8		9100	<2	2	170	<5	<5	<0.3	4	1	<2	2800	3.6
T-9000-2		9100	<2	<2	170	<5	<5	<0.3	4	1	<2	2500	4.2
T-9000-3		9800	<2	<2	180	<5	<5	<0.3	5	1	<2	2400	3.8
T-9000-5		20000	<2	3	320	<5	<5	<0.3	12	2	2	6700	7.8
T-9000-7		8100	<2	3	140	<5	<5	<0.3	5	1	<2	3200	3.5
T-9000-7	Lab Dup.	7800	<2	3	150	<5	<5	<0.3	5	1	<2	3800	3.3
T-12000-3		13000	<2	2	210	<5	<5	<0.3	10	1	<2	5100	5.7
T-12000-4		23000	<2	4	330	<5	<5	<0.3	17	2	2	10000	9
T-12000-4	Field Dup.	22000	<2	4	330	<5	<5	<0.3	15	2	2	8200	8.7
T-12000-5		6100	<2	<2	110	<5	<5	<0.3	2	<1	<2	800	2.8
T-12000-6		15000	<2	3	240	<5	<5	<0.3	8	1	<2	4200	6
T-12000-7		5300	<2	4	97	<5	<5	<0.3	8	1	<2	5900	2
T-12000-8		6000	<2	2	110	<5	<5	<0.3	4	1	<2	2100	3
T-20000-3		17000	<2	2	260	<5	<5	<0.3	14	2	2	7500	6.9
T-20000-7		4500	<2	2	84	<5	<5	<0.3	3	<1	<2	2400	1.9

TABLE 1b: Trace Elements at Thebaud Drill Site - June 1999 (Continued)

Unique_station_id	Replicate_id	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
T-250-1		< 5	390	< 2	< 0.01	2	< 2	< 0.5	49	0.1	< 2	0.5	21	21
T-250-1	Lab Dup.	< 5	230	< 2	< 0.01	2	< 2	< 0.5	48	0.1	< 2	0.3	16	16
T-250-3		< 5	49	< 2	< 0.01	2	< 2	< 0.5	65	0.1	< 2	0.2	9	9
T-250-5		< 5	160	< 2	< 0.01	3	< 2	< 0.5	62	0.2	< 2	0.4	17	15
T-250-7		< 5	35	< 2	< 0.01	2	< 2	< 0.5	60	0.1	< 2	0.2	7	8
T-500-1		< 5	120	< 2	< 0.01	2	< 2	< 0.5	45	0.1	< 2	0.3	12	11
T-500-1	Field Dup.	< 5	58	< 2	< 0.01	2	< 2	< 0.5	50	0.1	< 2	0.2	10	9
T-500-3		< 5	18	< 2	< 0.01	6	< 2	< 0.5	40	0.1	< 2	0.2	4	6
T-500-5		< 5	250	< 2	< 0.01	3	< 2	< 0.5	63	0.2	< 2	0.5	22	18
T-500-7		< 5	25	< 2	< 0.01	< 2	< 2	< 0.5	29	0.1	< 2	0.2	6	6
T-1000-1		< 5	16	< 2	< 0.01	< 2	< 2	< 0.5	32	0.1	< 2	0.3	5	6
T-1000-3		< 5	14	< 2	< 0.01	2	< 2	< 0.5	32	0.1	< 2	0.2	5	7
T-1000-5		< 5	10	< 2	< 0.01	< 2	< 2	< 0.5	22	0.1	< 2	0.4	4	5
T-1000-7		< 5	70	< 2	< 0.01	2	< 2	< 0.5	43	0.1	< 2	0.3	10	8
T-1000-7	Field Dup.	< 5	21	< 2	< 0.01	< 2	< 2	< 0.5	36	0.2	< 2	0.2	5	6
T-3000-1		< 5	100	< 2	< 0.01	2	< 2	< 0.5	34	0.1	< 2	0.2	11	10
T-3000-2		< 5	13	< 2	< 0.01	< 2	< 2	< 0.5	23	0.1	< 2	0.1	6	7
T-3000-3		< 5	88	< 2	< 0.01	2	< 2	< 0.5	62	0.2	< 2	0.3	12	10
T-3000-4		< 5	150	< 2	< 0.01	3	< 2	< 0.5	69	0.2	< 2	0.4	17	14
T-3000-5		< 5	68	< 2	< 0.01	2	< 2	< 0.5	68	0.2	< 2	0.3	12	10
T-3000-6		< 5	170	< 2	< 0.01	2	< 2	< 0.5	59	0.2	< 2	0.4	17	15
T-3000-6	Lab Dup.	< 5	120	< 2	< 0.01	2	< 2	< 0.5	65	0.2	< 2	0.4	15	13
T-3000-6	Field Dup.	< 5	88	< 2	< 0.01	2	< 2	< 0.5	54	0.2	< 2	0.3	13	12
T-3000-7		< 5	21	< 2	< 0.01	< 2	< 2	< 0.5	38	0.1	< 2	0.2	7	7
T-3000-8		< 5	15	< 2	< 0.01	< 2	< 2	< 0.5	27	0.1	< 2	0.1	6	6
T-6000-1		< 5	15	< 2	< 0.01	< 2	< 2	< 0.5	24	0.1	< 2	0.1	4	4
T-6000-3		< 5	21	< 2	< 0.01	< 2	< 2	< 0.5	28	0.1	< 2	0.1	4	5
T-6000-4		< 5	160	< 2	< 0.01	3	< 2	< 0.5	68	0.2	< 2	0.4	16	14
T-6000-5		< 5	95	< 2	< 0.01	3	< 2	< 0.5	79	0.2	< 2	0.4	14	12
T-6000-7		< 5	20	< 2	< 0.01	2	< 2	< 0.5	30	0.1	< 2	0.3	10	7
T-6000-8		< 5	17	< 2	< 0.01	< 2	< 2	< 0.5	43	0.1	< 2	0.1	7	6
T-9000-2		< 5	54	< 2	< 0.01	< 2	< 2	< 0.5	40	0.1	< 2	0.1	7	7
T-9000-3		< 5	22	< 2	< 0.01	< 2	< 2	< 0.5	39	0.1	< 2	0.2	6	7
T-9000-5		< 5	150	< 2	< 0.01	3	< 2	< 0.5	80	0.2	< 2	0.4	17	14
T-9000-7		< 5	44	< 2	< 0.01	< 2	< 2	< 0.5	35	0.1	< 2	0.2	8	7
T-9000-7	Lab Dup.	< 5	39	< 2	< 0.01	< 2	< 2	< 0.5	36	0.1	< 2	0.2	10	8
T-12000-3		< 5	140	< 2	< 0.01	2	< 2	< 0.5	58	0.1	< 2	0.5	14	13
T-12000-4		5	310	< 2	< 0.01	4	< 2	< 0.5	88	0.3	< 2	0.8	24	20
T-12000-4	Field Dup.	< 5	190	< 2	< 0.01	4	< 2	< 0.5	84	0.3	< 2	0.6	19	16
T-12000-5		< 5	17	< 2	< 0.01	< 2	< 2	< 0.5	28	0.1	< 2	0.2	3	5
T-12000-6		< 5	80	< 2	< 0.01	2	< 2	< 0.5	60	0.2	< 2	0.4	11	11
T-12000-7		< 5	40	< 2	< 0.01	2	< 2	< 0.5	31	0.1	< 2	0.3	16	8
T-12000-8		< 5	27	< 2	< 0.01	< 2	< 2	< 0.5	24	0.1	< 2	0.1	6	5
T-20000-3		< 5	220	< 2	< 0.01	3	< 2	< 0.5	69	0.2	< 2	0.6	20	16
T-20000-7		< 5	16	< 2	< 0.01	< 2	< 2	< 0.5	22	< 0.1	< 2	0.1	6	5

TABLE 2b: Petroleum Hydrocarbons at Thebaud Drill Site - June 1999

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₅ mg/kg	C ₁₆ -C ₂₀ mg/kg	YH (C ₁₁ -C ₂₁) mg/kg	YH mg/kg
T-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	21.7	3	24.70	24.7
T-250-1	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	29.7	3.4	33.10	33.1
T-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1310	35.9	1345.90	1350
T-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	22.8	6.29	29.09	29.1
T-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	560	25.5	585.50	586
T-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.18	3.15	5.33	5.32
T-500-1	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	13.2	6.41	19.60	19.6
T-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	315	8.62	323.62	324
T-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	5.69	3.52	9.21	9.21
T-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	6.7	3.32	10.02	10
T-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.51	1.86	3.37	3.37
T-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	30.9	4.6	35.50	35.5
T-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.44	2.38	3.82	3.83
T-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.54	2.06	3.60	3.6
T-1000-7	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.71	2.8	4.51	4.51
T-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.23	1.87	3.10	3.1
T-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.51	2.6	4.11	4.12
T-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.4	2.56	3.96	3.96
T-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.49	3.58	6.07	6.07
T-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.63	4.8	7.43	7.43
T-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.47	2.61	4.08	4.09
T-3000-6	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.55	2.72	4.27	4.27
T-3000-6	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.7	3.09	4.80	4.8
T-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.25	2.42	3.67	3.67
T-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.47	2.2	3.67	3.67
T-6000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.978	2.19	3.17	3.17
T-6000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.04	2.3	3.34	3.34
T-6000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.54	6.2	9.74	9.74
T-6000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.58	6.12	9.70	9.7
T-6000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.13	3.57	5.70	5.7
T-6000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.864	1.88	2.74	2.75
T-9000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.04	2.13	3.17	3.16
T-9000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.14	3.43	5.57	5.57
T-9000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.73	5.54	8.27	8.28
T-9000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.636	1.45	2.09	2.08
T-9000-7	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.876	1.59	2.47	2.46
T-12000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.82	3.58	5.40	5.4
T-12000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.07	7.99	12.06	12.1
T-12000-4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.84	7.45	11.30	11.3
T-12000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.47	3.4	4.87	4.87
T-12000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.95	4.16	6.11	6.11
T-12000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.14	2.41	3.55	3.54
T-12000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.63	2.12	4.75	4.74
T-20000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.61	7.89	12.50	12.5
T-20000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.37	2.67	4.04	4.05

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Thebaud Drill Site - June 1999 (Continued)

Unique_station_id	Replicate_id	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
I-230-1		< 0.05	< 0.05	< 0.05
I-230-1	Lab Dup.	< 0.05	< 0.05	< 0.05
I-230-3		< 0.05	< 0.05	< 0.05
I-230-5		< 0.05	< 0.05	< 0.05
I-230-7		< 0.05	< 0.05	< 0.05
I-500-1		< 0.05	< 0.05	< 0.05
I-500-1	Field Dup.	< 0.05	< 0.05	< 0.05
I-500-3		< 0.05	< 0.05	< 0.05
I-500-5		< 0.05	< 0.05	< 0.05
I-500-7		< 0.05	< 0.05	< 0.05
I-1000-1		< 0.05	< 0.05	< 0.05
I-1000-3		< 0.05	< 0.05	< 0.05
I-1000-5		< 0.05	< 0.05	< 0.05
I-1000-7		< 0.05	< 0.05	< 0.05
I-1000-7	Field Dup.	< 0.05	< 0.05	< 0.05
I-3000-1		< 0.05	< 0.05	< 0.05
I-3000-2		< 0.05	< 0.05	< 0.05
I-3000-3		< 0.05	< 0.05	< 0.05
I-3000-4		< 0.05	< 0.05	< 0.05
I-3000-5		< 0.05	< 0.05	< 0.05
I-3000-6		< 0.05	< 0.05	< 0.05
I-3000-6	Lab Dup.	< 0.05	< 0.05	< 0.05
I-3000-6	Field Dup.	< 0.05	< 0.05	< 0.05
I-3000-7		< 0.05	< 0.05	< 0.05
I-3000-8		< 0.05	< 0.05	< 0.05
I-6000-1		< 0.05	< 0.05	< 0.05
I-6000-3		< 0.05	< 0.05	< 0.05
I-6000-4		< 0.05	< 0.05	< 0.05
I-6000-5		< 0.05	< 0.05	< 0.05
I-6000-7		< 0.05	< 0.05	< 0.05
I-6000-8		< 0.05	< 0.05	< 0.05
I-9000-2		< 0.05	< 0.05	< 0.05
I-9000-3		< 0.05	< 0.05	< 0.05
I-9000-5		< 0.05	< 0.05	< 0.05
I-9000-7		< 0.05	< 0.05	< 0.05
I-9000-7	Lab Dup.	< 0.05	< 0.05	< 0.05
I-12000-3		< 0.05	< 0.05	< 0.05
I-12000-4		< 0.05	< 0.05	< 0.05
I-12000-4	Field Dup.	< 0.05	< 0.05	< 0.05
I-12000-5		< 0.05	< 0.05	< 0.05
I-12000-6		< 0.05	< 0.05	< 0.05
I-12000-7		< 0.05	< 0.05	< 0.05
I-12000-8		< 0.05	< 0.05	< 0.05
I-20000-3		< 0.05	< 0.05	< 0.05
I-20000-7		< 0.05	< 0.05	< 0.05

TABLE 4b: Sediment Quality at Thebaud Drill Site - June 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
T-250-1		0.1	0.1	< 0.1	99.1	0.1	0.8	0.0004	0.35
T-250-1	Lab Dup.			< 0.1	99.1	0.1	0.8		
T-250-3		0.3	0.1	< 0.1	98.8	0.2	1.1	0.0010	<0.20
T-250-5		0.2	< 0.1	< 0.1	98.8	0.1	1.1	0.0005	0.25
T-250-7		0.3	0.1	< 0.1	99	0.2	0.8	0.0004	0.50
T-500-1		0.1	< 0.1	< 0.1	99.2	< 0.1	0.7	0.0003	0.45
T-500-1	Field Dup.	0.2	< 0.1	0.6	98.4	0.1	0.8	0.0005	<0.20
T-500-3		0.3	0.1	0.8	98.4	0.1	0.7	0.0002	<0.20
T-500-5		0.3	< 0.1	< 0.1	98.9	0.1	1.1	0.0003	0.28
T-500-7		0.1	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0007	0.52
T-1000-1		0.1	< 0.1	0.3	98.9	< 0.1	0.8	0.0004	0.52
T-1000-3		0.3	< 0.1	0.3	98.4	< 0.1	1	0.0003	0.30
T-1000-5		0.1	0.1	1.9	97.6	< 0.1	0.6	0.0004	0.50
T-1000-7		0.1	< 0.1	< 0.1	99.2	< 0.1	0.9	0.0006	0.67
T-1000-7	Field Dup.	0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0010	0.40
T-3000-1		0.1	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0003	<0.20
T-3000-2		0.1	0.1	< 0.1	99.1	< 0.1	0.8	0.0010	0.38
T-3000-3		0.3	0.1	< 0.1	99	0.1	1	0.0009	0.28
T-3000-4		0.3	< 0.1	< 0.1	98.7	0.3	1	0.0004	0.28
T-3000-5		0.4	< 0.1	< 0.1	98.7	0.1	1.2	0.0018	0.82
T-3000-6		0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0004	0.35
T-3000-6	Lab Dup.			< 0.1	99	< 0.1	1		
T-3000-6	Field Dup.	0.2	< 0.1	< 0.1	99	< 0.1	1	0.0002	1.12
T-3000-7		0.1	< 0.1	< 0.1	99.1	0.1	0.8	0.0005	0.27
T-3000-8		0.1	0.1	< 0.1	99.2	< 0.1	0.7	0.0004	0.43
T-6000-1		0.1	< 0.1	0.1	99.2	0.1	0.6	0.0006	0.37
T-6000-3		0.1	< 0.1	0.2	99	< 0.1	0.8	0.0005	0.33
T-6000-4		0.4	0.1	< 0.1	98.7	0.3	1	0.0002	0.00
T-6000-5		0.5	0.3	< 0.1	98.4	0.3	1.3	0.0003	0.25
T-6000-7		0.2	< 0.1	0.2	99	0.1	0.8	0.0007	<0.20
T-6000-8		0.1	0.1	< 0.1	99.2	0.1	0.7	0.0003	<0.20
T-9000-2		0.1	< 0.1	< 0.1	99.1	< 0.1	0.9	0.0009	0.70
T-9000-3		0.2	0.1	< 0.1	99	0.1	0.9	0.0006	0.37
T-9000-5		0.6	0.3	< 0.1	97.8	0.7	1.5	0.0002	0.35
T-9000-7		0.1	< 0.1	< 0.1	99	< 0.1	1	0.0005	0.32
T-9000-7	Lab Dup.			< 0.1	99	< 0.1	1		
T-12000-3		0.2	0.1	< 0.1	98.9	0.1	1	0.0003	0.30
T-12000-4		1.1	0.3	< 0.1	96.5	1.2	2.3	0.0003	0.35
T-12000-4	Field Dup.	1.3	0.1	< 0.1	96.8	1.4	1.9	0.0005	<0.20
T-12000-5		0.2	0.1	0.5	98.4	0.1	1	0.0004	<0.20
T-12000-6		0.4	< 0.1	< 0.1	98.5	0.3	1.2	0.0002	0.25
T-12000-7		0.1	< 0.1	1.2	98.3	< 0.1	0.5	0.0005	0.30
T-12000-8		0.1	< 0.1	0.2	99	0.1	0.7	0.0003	0.35
T-20000-3		0.6	< 0.1	< 0.1	98.4	0.3	1.3	0.0003	0.55
T-20000-7		0.2	0.4	0.5	98.8	0.1	0.6	0.0020	<0.24

TABLE 5b: Toxicity at Theband Drill Site - June 1999

Unique_station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echisoid Fertilization		Microtox EC50
				Mortality %	Control Mortality %	% Fertilization	IC 50	
T-250-1		0.33	<20	0	3	92.0	>100%	>100%
T-250-1	Lab Dup.							
T-250-3		<0.25	<20	81	3	87.8	>100%	>100%
T-250-5		18.50	<20	0	3	80.8	>100%	>100%
T-250-7		<0.25	<20	95	3	79.5	>100%	>100%
T-500-1		1.21	<20	11	3	51.0	>100%	>100%
T-500-1	Field Dup.	9.07	<20	7	3	36.5	91.00%	>100%
T-500-3		3.13	<20	5	3	83.0	>100%	>100%
T-500-5		3.21	<20	25	3	15.8	69.10%	>100%
T-500-7		2.91	<20	12	3	66.8	>100%	>100%
T-1000-1								
T-1000-3								
T-1000-5								
T-1000-7								
T-1000-7	Field Dup.							
T-3000-1		0.78	<20	18	3	46.3	>100%	>100%
T-3000-2								
T-3000-3		7.26	<20	13	3	66.3	>100%	>100%
T-3000-4								
T-3000-5		10.20	<20	5	3	0.0	66.40%	>100%
T-3000-6								
T-3000-6	Lab Dup.							
T-3000-6	Field Dup.							
T-3000-7		2.33	<20	6	3	83.3	>100%	>100%
T-3000-8								
T-6000-1								
T-6000-3								
T-6000-4								
T-6000-5								
T-6000-7								
T-6000-8								
T-9000-2								
T-9000-3								
T-9000-5								
T-9000-7								
T-9000-7	Lab Dup.							
T-12000-3								
T-12000-4								
T-12000-4	Field Dup.							
T-12000-5								
T-12000-6								
T-12000-7								
T-12000-8								
T-20000-3		14.80	<20	9	3	30.0	61.90%	>100%
T-20000-7		8.93	<20	17	3	39.0	87.20%	>100%

**Laboratory Analytical Results
for Sediment from Thebaud Field, November 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1c: Trace Elements at Thebaud Drill Site - November 1999

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg
T-250-1		7900	<2	2	170	<5	<5	<0.3	8	1	<2	4200	3.9
T-250-3		11000	<2	2	280	<5	<5	<0.3	15	2	2	6100	5.8
T-250-3	Lab Dup.	8800	<2	2	240	<5	<5	<0.3	11	1	2	5300	4.6
T-250-5		7400	<2	2	180	<5	<5	<0.3	6	1	<2	3200	3.5
T-250-7		8100	<2	<2	260	<5	<5	<0.3	7	1	<2	3900	4.1
T-500-1		8800	<2	2	180	<5	7	<0.3	9	1	2	5300	5
T-500-3		4500	<2	<2	120	<5	<5	<0.3	4	1	<2	2300	3
T-500-5		13000	<2	2	230	<5	<5	<0.3	20	2	2	9300	7
T-500-7		6500	<2	2	130	<5	<5	<0.3	6	1	<2	3300	3.5
T-500-7	Field Dup.	11000	<2	2	210	<5	<5	<0.3	21	2	15	7100	6.6
T-500-7	Lab Dup.												
T-1000-1		6400	<2	<2	150	<5	<5	<0.3	4	1	<2	2400	3.1
T-1000-3		5600	<2	<2	120	<5	<5	<0.3	4	<1	<2	2400	2.5
T-1000-5		5200	<2	<2	120	<5	<5	<0.3	3	<1	<2	1800	2.3
T-1000-7		7200	<2	2	150	<5	<5	<0.3	6	1	2	3500	3.5
T-1000-7	Lab Dup.	7200	<2	2	160	<5	<5	<0.3	8	1	<2	3600	3.8
T-3000-1		6700	<2	<2	140	<5	<5	<0.3	7	1	<2	4500	4.1
T-3000-1	Field Dup.	7100	<2	<2	170	<5	<5	<0.3	4	1	2	2800	3.9
T-3000-2		5000	<2	<2	84	<5	<5	<0.3	3	<1	<2	1600	1.8
T-3000-3		11000	<2	2	220	<5	<5	<0.3	10	1	2	5700	5.5
T-3000-4		13000	<2	3	230	<5	<5	<0.3	14	2	2	7800	6.3
T-3000-5		16000	<2	3	260	<5	<5	<0.3	10	1	2	6700	6.6
T-3000-6		13000	<2	3	240	<5	<5	<0.3	11	1	<2	6400	5.9
T-3000-7		7900	<2	2	170	<5	<5	<0.3	4	1	<2	3200	3.7
T-3000-7	Lab Dup.												
T-3000-8		5600	<2	<2	110	<5	<5	<0.3	4	1	<2	2400	3
T-6000-1		7100	<2	2	140	<5	<5	<0.3	8	1	<2	4500	4
T-6000-3		6200	<2	<2	110	<5	<5	<0.3	3	1	<2	2200	2.8
T-6000-4		17000	<2	3	270	<5	<5	<0.3	15	2	2	7200	6.9
T-6000-5		18000	<2	3	280	<5	<5	<0.3	14	2	2	8600	7.6
T-6000-7		6600	<2	4	130	<5	<5	<0.3	6	1	<2	5200	3.3
T-6000-8		8200	<2	2	150	<5	<5	<0.3	6	1	<2	3800	3.9
T-9000-2		8600	<2	<2	160	<5	<5	<0.3	8	1	2	5000	4.8
T-9000-3		12000	<2	2	220	<5	<5	<0.3	10	1	2	5100	5.6
T-9000-5		20000	<2	3	330	<5	<5	<0.3	21	3	3	11000	9.1
T-9000-5	Field Dup.	19000	<2	3	310	<5	<5	<0.3	14	2	2	7700	7.9
T-9000-5	Lab Dup.	18000	<2	3	290	<5	<5	<0.3	11	2	3	5900	7.2
T-9000-7		9900	<2	3	200	<5	<5	<0.3	5	1	<2	5000	5
T-12000-3		12000	<2	2	220	<5	<5	<0.3	15	2	2	7500	6.5
T-12000-4		5400	<2	2	80	<5	<5	<0.3	3	1	<2	1400	2.6
T-12000-4	Lab Dup.	5800	<2	<2	100	<5	<5	<0.3	2	<1	<2	950	2.6
T-12000-5		7400	<2	<2	140	<5	<5	<0.3	2	1	<2	1400	3.5
T-12000-6		15000	<2	3	260	<5	<5	<0.3	9	1	2	5500	6.8
T-12000-7		4800	<2	2	87	<5	<5	<0.3	3	1	<2	3100	2.2
T-12000-8		5400	<2	2	110	<5	<5	<0.3	2	<1	<2	1900	3
T-20000-3		15000	<2	2	270	<5	<5	<0.3	16	2	2	9600	7.2
T-20000-7		4800	<2	<2	110	<5	<5	<0.3	2	<1	<2	1700	2.6

TABLE 1c: Trace Elements at Thebaud Drill Site - November 1999 (Continued)

Unique_station_id	Replicate_id	Lithium mg/kg	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
T-250-1		< 5	80	< 2	< 0.01	2	< 2	< 0.5	43	0.1	< 2	0.2	11	11
T-250-3		< 5	170	< 2	< 0.01	3	< 2	< 0.5	55	0.1	< 2	0.5	19	15
T-250-3	Lab Dup.	< 5	120	< 2	< 0.01	2	< 2	< 0.5	48	0.1	< 2	0.3	15	12
T-250-5		< 5	30	< 2	< 0.01	2	< 2	< 0.5	37	0.1	< 2	0.2	8	7
T-250-7		< 5	76	< 2	< 0.01	2	< 2	< 0.5	41	0.1	< 2	0.3	9	8
T-500-1		< 5	130	< 2	< 0.01	2	< 2	< 0.5	46	0.1	< 2	0.4	15	13
T-500-3		< 5	19	< 2	< 0.01	< 2	< 2	< 0.5	25	< 0.1	< 2	0.1	6	6
T-500-5		< 5	300	< 2	< 0.01	3	< 2	< 0.5	62	0.2	< 2	0.6	25	20
T-500-7		< 5	49	< 2	< 0.01	2	< 2	< 0.5	30	0.1	< 2	0.2	8	24
T-500-7	Field Dup.	< 5	220	< 2	< 0.01	3	< 2	< 0.5	49	0.1	< 2	0.7	20	16
T-500-7	Lab Dup.													
T-1000-1		< 5	26	< 2	< 0.01	< 2	< 2	< 0.5	32	0.1	< 2	0.1	5	6
T-1000-3		< 5	20	< 2	< 0.01	< 2	< 2	< 0.5	30	0.1	< 2	0.2	6	7
T-1000-5		< 5	15	< 2	< 0.01	< 2	< 2	< 0.5	27	0.1	< 2	0.1	4	6
T-1000-7		< 5	37	< 2	< 0.01	2	< 2	< 0.5	37	0.1	< 2	0.2	9	8
T-1000-7	Lab Dup.	< 5	41	< 2	< 0.01	2	< 2	< 0.5	36	0.1	< 2	0.2	10	8
T-3000-1		< 5	120	< 2	< 0.01	< 2	< 2	< 0.5	32	0.1	< 2	0.2	10	10
T-3000-1	Field Dup.	< 5	55	< 2	< 0.01	2	< 2	< 0.5	36	0.1	< 2	0.2	8	9
T-3000-2		< 5	7	< 2	< 0.01	< 2	< 2	< 0.5	20	0.1	< 2	0.2	3	5
T-3000-3		< 5	140	< 2	< 0.01	2	< 2	< 0.5	56	0.1	< 2	0.4	14	13
T-3000-4		< 5	190	< 2	< 0.01	3	< 2	< 0.5	60	0.2	< 2	0.4	18	14
T-3000-5		< 5	140	< 2	< 0.01	3	< 2	< 0.5	72	0.2	< 2	0.4	14	12
T-3000-6		< 5	140	< 2	< 0.01	2	< 2	< 0.5	60	0.2	< 2	0.5	15	12
T-3000-7		< 5	34	< 2	< 0.01	2	< 2	< 0.5	39	0.1	< 2	0.2	7	7
T-3000-7	Lab Dup.													
T-3000-8		< 5	42	< 2	< 0.01	< 2	< 2	< 0.5	29	0.1	< 2	0.2	5	8
T-6000-1		< 5	110	< 2	< 0.01	2	< 2	< 0.5	35	0.1	< 2	0.2	10	9
T-6000-3		< 5	43	< 2	< 0.01	< 2	< 2	< 0.5	31	0.1	< 2	0.2	5	6
T-6000-4		< 5	170	< 2	< 0.01	3	< 2	< 0.5	77	0.2	< 2	0.6	18	15
T-6000-5		< 5	260	< 2	< 0.01	3	< 2	< 0.5	80	0.2	< 2	0.5	19	15
T-6000-7		< 5	37	< 2	< 0.01	3	< 2	< 0.5	29	0.1	< 2	0.3	14	9
T-6000-8		< 5	43	< 2	< 0.01	2	< 2	< 0.5	40	0.1	< 2	0.2	9	7
T-9000-2		< 5	140	< 2	< 0.01	2	< 2	< 0.5	42	0.1	< 2	0.3	12	11
T-9000-3		< 5	120	< 2	< 0.01	2	< 2	< 0.5	53	0.1	< 2	0.3	12	11
T-9000-5		< 5	380	< 2	< 0.01	4	< 2	< 0.5	83	0.2	< 2	0.9	26	20
T-9000-5	Field Dup.	< 5	220	< 2	< 0.01	3	< 2	< 0.5	82	0.2	< 2	0.6	20	14
T-9000-5	Lab Dup.	< 5	150	< 2	< 0.01	3	< 2	< 0.5	76	0.2	6	0.4	16	12
T-9000-7		< 5	64	< 2	< 0.01	2	< 2	< 0.5	49	0.1	< 2	0.3	11	9
T-12000-3		< 5	250	< 2	< 0.01	3	< 2	< 0.5	62	0.1	< 2	0.5	19	20
T-12000-4		< 5	26	< 2	< 0.01	< 2	< 2	< 0.5	29	0.1	< 2	0.3	4	5
T-12000-4	Lab Dup.	< 5	20	< 2	< 0.01	< 2	< 2	< 0.5	30	0.1	< 2	0.2	3	8
T-12000-5		< 5	32	< 2	< 0.01	< 2	< 2	< 0.5	36	0.1	< 2	0.2	4	6
T-12000-6		< 5	120	< 2	< 0.01	2	< 2	< 0.5	68	0.2	< 2	0.4	13	11
T-12000-7		< 5	23	< 2	< 0.01	< 2	< 2	< 0.5	28	< 0.1	< 2	0.3	7	6
T-12000-8		< 5	29	< 2	< 0.01	< 2	< 2	< 0.5	34	0.1	< 2	0.5	4	6
T-20000-3		< 5	340	< 2	< 0.01	3	< 2	< 0.5	66	0.2	< 2	0.6	22	18
T-20000-7		< 5	12	< 2	< 0.01	< 2	< 2	< 0.5	21	0.1	< 2	0.1	3	4

TABLE 2c: Petroleum Hydrocarbons at Thebaud Drill Site - November 1999

Unique station id	Replicate id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₅ mg/kg	C ₁₆ -C ₂₀ mg/kg	TKH (C ₁₁ -C ₂₀) mg/kg	TPH mg/kg
T-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.1	1.43	4.52	4.52
T-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	12.1	2.11	14.2	14.2
T-250-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	18.9	2.41	21.3	21.3
T-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	8.95	2.32	11.3	11.3
T-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	21.4	2.04	23.4	23.4
T-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	7	2.13	9.13	9.13
T-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.9	1.64	3.54	3.54
T-500-7	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-500-7	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-1000-7	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-1	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.931	1.23	< 3	< 3
T-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-7	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-6000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-6000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-6000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-6000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-6000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-6000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-9000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-9000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-9000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-9000-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-9000-5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-9000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-12000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-12000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-12000-4	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-12000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-12000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-12000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-12000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-20000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
T-20000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3

TABLE 3c: Polycyclic Aromatic Hydrocarbons at Thebaud Drill Site - November 1999 (Continued)

Unique_station_id	Replicate_id	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
T-250-1		< 0.05	< 0.05	< 0.05
T-250-3		< 0.05	< 0.05	< 0.05
T-250-5	Lab Dup.	< 0.05	< 0.05	< 0.05
T-250-7		< 0.05	< 0.05	< 0.05
T-500-1		< 0.05	< 0.05	< 0.05
T-500-3		< 0.05	< 0.05	< 0.05
T-500-5		< 0.05	< 0.05	< 0.05
T-500-7		< 0.05	< 0.05	< 0.05
T-500-7	Field Dup.	< 0.05	< 0.05	< 0.05
T-500-7	Lab Dup.			
T-1000-1		< 0.05	< 0.05	< 0.05
T-1000-3		< 0.05	< 0.05	< 0.05
T-1000-5		< 0.05	< 0.05	< 0.05
T-1000-7		< 0.05	< 0.05	< 0.05
T-1000-7	Lab Dup.	< 0.05	< 0.05	< 0.05
T-3000-1		< 0.05	< 0.05	< 0.05
T-3000-1	Field Dup.	< 0.05	< 0.05	< 0.05
T-3000-2		< 0.05	< 0.05	< 0.05
T-3000-3		< 0.05	< 0.05	< 0.05
T-3000-4		< 0.05	< 0.05	< 0.05
T-3000-5		< 0.05	< 0.05	< 0.05
T-3000-6		< 0.05	< 0.05	< 0.05
T-3000-7		< 0.05	< 0.05	< 0.05
T-3000-7	Lab Dup.			
T-3000-8		< 0.05	< 0.05	< 0.05
T-6000-1		< 0.05	< 0.05	< 0.05
T-6000-3		< 0.05	< 0.05	< 0.05
T-6000-4		< 0.05	< 0.05	< 0.05
T-6000-5		< 0.05	< 0.05	< 0.05
T-6000-7		< 0.05	< 0.05	< 0.05
T-6000-8		< 0.05	< 0.05	< 0.05
T-9000-2		< 0.05	< 0.05	< 0.05
T-9000-3		< 0.05	< 0.05	< 0.05
T-9000-5		< 0.05	< 0.05	< 0.05
T-9000-5	Field Dup.	< 0.05	< 0.05	< 0.05
T-9000-5	Lab Dup.	< 0.05	< 0.05	< 0.05
T-9000-7		< 0.05	< 0.05	< 0.05
T-12000-3		< 0.05	< 0.05	< 0.05
T-12000-4		< 0.05	< 0.05	< 0.05
T-12000-4	Lab Dup.	< 0.05	< 0.05	< 0.05
T-12000-5		< 0.05	< 0.05	< 0.05
T-12000-6		< 0.05	< 0.05	< 0.05
T-12000-7		< 0.05	< 0.05	< 0.05
T-12000-8		< 0.05	< 0.05	< 0.05
T-20000-3		< 0.05	< 0.05	< 0.05
T-20000-7		< 0.05	< 0.05	< 0.05

TABLE 4c: Sediment Quality at Thebaud Drill Site - November 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
T-250-1		0.2	< 0.1	< 0.1	99.2	0.1	0.7	0.0006	<0.20
T-250-3		0.3	0.1	< 0.1	99.1	0.1	0.8	0.0008	<0.25
T-250-3	Lab Dup.	0.3	0.1	< 0.1	99	0.2	0.8		
T-250-5		0.3	< 0.1	< 0.1	99.1	0.1	0.8	0.0009	<0.27
T-250-7		0.2	< 0.1	< 0.1	99.1	0.1	0.8	0.0013	<0.20
T-500-1		0.2	< 0.1	< 0.1	99.1	0.1	0.8	0.0009	<0.31
T-500-3		0.5	< 0.1	0.4	98.8	0.1	0.7	0.0006	<0.20
T-500-5		0.3	0.1	< 0.1	99.1	0.1	0.8	0.0011	<0.30
T-500-7		0.3	< 0.1	1.6	97.5	0.1	0.8	0.0020	<0.20
T-500-7	Field Dup.	0.1	0.1	< 0.1	98.9	0.1	1	0.0006	<0.20
T-500-7	Lab Dup.								
T-1000-1		0.1	0.1	< 0.1	99.2	0.1	0.7	0.0008	<0.20
T-1000-3		0.2	< 0.1	< 0.1	99.3	< 0.1	0.7	0.0009	<0.25
T-1000-5		0.1	0.1	< 0.1	99.3	< 0.1	0.7	0.0009	<0.25
T-1000-7		0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0009	<0.20
T-1000-7	Lab Dup.	0.1	0.1	< 0.1	99.2	< 0.1	0.8		
T-3000-1		0.1	0.1	< 0.1	99.1	0.1	0.8	0.0012	<0.20
T-3000-1	Field Dup.	0.1	< 0.1	< 0.1	99	0.1	0.9	0.0009	<0.20
T-3000-2		0.2	< 0.1	0.1	99.1	< 0.1	0.7	0.0011	0.35
T-3000-3		0.2	< 0.1	< 0.1	99.1	0.1	0.8	0.0004	<0.20
T-3000-4		0.4	< 0.1	< 0.1	99	0.2	0.8	0.0003	<0.20
T-3000-5		0.4	0.1	< 0.1	98.9	0.2	0.9	0.0006	0.25
T-3000-6		0.4	0.1	0.1	98.6	0.2	1.1	0.0005	<0.20
T-3000-7		0.1	0.1	< 0.1	99.2	0.1	0.7	0.0008	0.38
T-3000-7	Lab Dup.								
T-3000-8		0.2	< 0.1	0.1	99.2	< 0.1	0.7	0.0006	0.33
T-6000-1		0.2	< 0.1	< 0.1	99	0.3	0.7	0.0003	0.23
T-6000-3		0.2	< 0.1	< 0.1	99.2	0.1	0.7	0.0025	0.28
T-6000-4		0.6	0.2	< 0.1	98.9	0.2	0.9	0.0009	0.74
T-6000-5		0.8	0.1	< 0.1	98.7	0.2	1.1	0.0013	0.38
T-6000-7		0.1	0.1	< 0.1	99.3	0.1	0.6	0.0009	0.42
T-6000-8		0.2	0.1	< 0.1	99.2	< 0.1	0.7	0.0006	0.33
T-9000-2		0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0009	0.42
T-9000-3		0.3	< 0.1	< 0.1	99.1	0.1	0.8	0.0027	0.48
T-9000-5		1.2	0.2	< 0.1	98.4	0.4	1.1	0.0003	<0.20
T-9000-5	Field Dup.	1.4	0.1	0.2	97.6	0.5	1.6	0.0004	<0.20
T-9000-5	Lab Dup.	1.4	< 0.1	0.1	97.6	0.6	1.7		
T-9000-7		0.2	< 0.1	< 0.1	99.2	< 0.1	0.8	0.0027	1.60
T-12000-3		0.3	< 0.1	< 0.1	99	0.2	0.8	0.0006	0.23
T-12000-4		0.8	0.2	0.4	98.3	0.3	0.9	0.0023	0.20
T-12000-4	Lab Dup.	0.5	0.2	0.3	98.5	0.2	0.9		
T-12000-5		0.6	0.3	9.4	87.6	1.9	1	0.0004	0.20
T-12000-6		0.6	0.1	< 0.1	98.9	< 0.1	1.1	0.0006	<0.20
T-12000-7		0.2	0.7	1.8	97.5	< 0.1	0.6	0.0006	<0.20
T-12000-8		0.1	0.1	1.5	97.8	< 0.1	0.7	0.0009	0.22
T-20000-3		0.9	0.2	< 0.1	98.3	0.5	1.3	0.0011	0.62
T-20000-7		0.5	< 0.1	3.2	96.3	< 0.1	0.5	0.0006	<0.25

TABLE 5c: Toxicity at Thebaud Stations - November 1999

Unique_station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echisoid % Fertilization	Fertilization EC50	Mieretes EC50
				Mortality %	Control Mortality %			
T-250-1		<0.50	<10	3	0	91.9	>100%	>100%
T-250-3		<0.50	<10	3	0	58.5	>100%	>100%
T-250-3	Lab Dup.	<0.50						
T-250-5		<0.50	<10	3	0	82.3	>100%	>100%
T-250-7		<0.50	<10	2	0	48.8	>100%	>100%
T-500-1		<0.50	<10	5	0	42.8	94.00%	>100%
T-500-3		<0.50	<10	26	0	85.5	>100%	>100%
T-500-5		<0.50	<10	7	0	43.3	89.90%	>100%
T-500-7		<0.50	<10	9	0	90.5	>100%	>100%
T-500-7	Field Dup.	<0.50	<10	6	0	75.0	>100%	>100%
T-500-7	Lab Dup.	<0.50						
T-1000-1								
T-1000-3								
T-1000-5								
T-1000-7								
T-1000-7	Lab Dup.							
T-3000-1		<0.50	<10	8	0	93.5	>100%	>100%
T-3000-1	Field Dup.	<0.50	<10	11	0	71.8	>100%	>100%
T-3000-2								
T-3000-3		<0.50	<10	3	0	93.5	>100%	>100%
T-3000-4								
T-3000-5		0.59	<10	7	0	94.0	>100%	>100%
T-3000-6								
T-3000-7		<0.50	<10	6	0	89.0	>100%	>100%
T-3000-7	Lab Dup.	<0.50						
T-3000-8								
T-6000-1								
T-6000-3								
T-6000-4								
T-6000-5								
T-6000-7								
T-6000-8								
T-9000-2								
T-9000-3								
T-9000-5								
T-9000-5	Field Dup.							
T-9000-5	Lab Dup.							
T-9000-7								
T-12000-3								
T-12000-4								
T-12000-4	Lab Dup.							
T-12000-5								
T-12000-6								
T-12000-7								
T-12000-8								
T-20000-3		8.10	<10	11	0	87.3	>100%	>100%
T-20000-7		<0.50	<10	14	0	93.5	>100%	>100%

**Laboratory Analytical Results
for Sediment from Thebaud Field, June 2000**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1a: Trace Elements at Thebaud Drill Site - Spring 2000

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
T-250-1D4		11000	<2	<2	230	<5	<0.3	7	1	<2	5300	7	<5
T-250-3D4		14000	<2	<2	1200	<5	<0.3	7	1	<2	3700	5	<5
T-250-5D4		14000	<2	<2	250	<5	<0.3	8	1	<2	5500	5.4	<5
T-250-7D4		12000	<2	<2	410	<5	<0.3	8	1	2	5300	4.7	<5
T-250-7-D4	Field Dup.	11000	<2	<2	280	<5	<0.3	5	1	<2	3100	4.3	<5
T-500-1D4		11000	<2	<2	180	<5	<0.3	9	1	2	6900	5.5	<5
T-500-2D4		14000	<2	2	250	<5	<0.3	10	1	2	6200	6	<5
T-500-3D4		15000	<2	2	900	<5	<0.3	8	1	<2	4200	5.6	<5
T-500-4D4		6500	<2	<2	150	<5	<0.3	3	<1	<2	1900	2.7	<5
T-500-5D4		14000	<2	2	250	<5	<0.3	10	2	2	7300	6.3	<5
T-500-6D4		12000	<2	<2	190	<5	<0.3	9	1	2	5500	5.4	<5
T-500-7D4		10000	<2	2	200	<5	<0.3	8	1	<2	5000	4.9	<5
T-500-8D4		10000	<2	<2	210	<5	<0.3	6	1	<2	3100	4.4	<5
T-1000-1D4		6700	<2	<2	140	<5	<0.3	4	<1	<2	2100	2.9	<5
T-1000-3D4		8800	<2	<2	210	<5	<0.3	4	1	<2	2900	3.7	<5
T-1000-5D4		5500	<2	<2	110	<5	<0.3	3	<1	<2	1800	2	<5
T-1000-5-D4	Field Dup.	5100	<2	<2	100	<5	<0.3	3	<1	<2	1600	2	<5
T-1000-5D4	Lab Dup.	5100	<2	<2	76	<5	<0.3	3	<1	<2	1800	1.7	<5
T-1000-5-D4d	Lab Dup.	4200	<2	<2	66	<5	<0.3	2	<1	<2	1600	1.7	<5
T-1000-7D4		9500	<2	<2	210	<5	<0.3	6	1	<2	2900	4.1	<5
T-3000-1D4		6900	<2	<2	140	<5	<0.3	6	1	<2	3100	3.8	<5
T-3000-1-D4	Field Dup.	7500	<2	<2	150	<5	<0.3	4	1	<2	2300	3.5	<5
T-3000-3D4		12000	<2	2	210	<5	<0.3	8	1	<2	4600	5.4	<5
T-3000-5D4		16000	<2	2	270	<5	<0.3	9	1	<2	5000	6.4	<5
T-3000-7D4		6200	<2	<2	140	<5	<0.3	4	<1	<2	2500	2.8	<5
T-6000-1D4		7300	<2	<2	150	<5	<0.3	3	<1	<2	1900	3.4	<5
T-6000-3D4		6400	<2	<2	140	<5	<0.3	3	<1	<2	1400	3	<5
T-6000-5D4		17000	<2	3	290	<5	<0.3	11	1	2	5800	7.2	<5
T-6000-7D4		5900	<2	<2	120	<5	<0.3	4	1	<2	2800	3	<5
T-20000-3D4		17000	<2	2	280	<5	<0.3	12	2	2	6800	6.8	<5
T-20000-7D4		3200	<2	<2	76	<5	<0.3	2	<1	2	1300	2.3	<5

TABLE 1a: Trace Elements at Thebaud Drill Site - Spring 2000 (Continued)

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
T-250-1D4		120	<2	<0.01	2	<2	46	0.1	<2	0.3	12	9
T-250-3D4		59	<2	<0.01	2	<2	79	0.1	<2	0.2	8	8
T-250-5D4		97	<2	<0.01	2	<2	53	0.1	<2	0.3	11	9
T-250-7D4		120	<2	<0.01	2	<2	51	0.1	<2	0.3	12	10
T-250-7-D4	Field Dup.	50	<2	<0.01	<2	<2	49	0.1	<2	0.2	8	6
T-500-1D4		180	<2	<0.01	2	<2	42	0.1	<2	0.4	14	12
T-500-2D4		130	<2	<0.01	2	<2	60	0.2	<2	0.4	14	11
T-500-3D4		51	<2	0.01	2	<2	76	0.1	<2	0.2	9	8
T-500-4D4		19	<2	<0.01	<2	<2	26	0.1	<2	0.1	5	5
T-500-5D4		180	<2	<0.01	2	<2	58	0.1	<2	0.4	16	12
T-500-6D4		140	<2	<0.01	2	<2	49	0.1	<2	0.3	13	12
T-500-7D4		120	<2	<0.01	2	<2	44	0.1	<2	0.3	12	9
T-500-8D4		55	<2	<0.01	<2	<2	43	0.1	<2	0.2	8	6
T-1000-1D4		20	<2	<0.01	<2	<2	27	0.1	<2	0.2	5	5
T-1000-3D4		21	<2	<0.01	<2	<2	40	0.1	<2	0.2	6	4
T-1000-5D4		20	<2	<0.01	<2	<2	28	0.1	<2	0.2	5	6
T-1000-5-D4	Field Dup.	11	<2	<0.01	<2	<2	24	0.1	<2	0.1	4	4
T-1000-5D4	Lab Dup.	12	<2	<0.01	<2	<2	23	<0.1	<2	0.2	5	5
T-1000-5-D4d	Lab Dup.	11	<2	<0.01	<2	<2	17	<0.1	<2	0.1	4	4
T-1000-7D4		37	<2	<0.01	2	<2	41	0.1	<2	0.2	7	6
T-3000-1D4		66	<2	<0.01	<2	<2	33	0.1	<2	0.2	8	8
T-3000-1-D4	Field Dup.	36	<2	<0.01	<2	<2	34	0.1	<2	0.2	6	5
T-3000-3D4		91	<2	<0.01	2	<2	52	0.1	<2	0.3	10	9
T-3000-5D4		76	<2	<0.01	2	<2	68	0.2	<2	0.4	11	10
T-3000-7D4		20	<2	<0.01	<2	<2	30	0.1	<2	0.1	6	6
T-6000-1D4		29	<2	<0.01	<2	<2	33	0.1	<2	0.2	5	6
T-6000-3D4		20	<2	<0.01	<2	<2	31	0.1	<2	0.2	3	6
T-6000-5D4		110	<2	<0.01	3	<2	74	0.2	<2	0.4	13	12
T-6000-7D4		28	<2	<0.01	<2	<2	28	0.1	<2	0.2	8	7
T-20000-3D4		190	<2	<0.01	3	<2	69	0.2	<2	0.6	15	14
T-20000-7D4		9	<2	0.01	2	<2	17	<0.1	<2	0.2	4	13

TABLE 2a: Petroleum Hydrocarbons at Thebaud Drill Site - Spring 2000

Unique station id	Replicate id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₅ mg/kg	C ₁₆ -C ₂₁ mg/kg	TEH (C ₁₀ -C ₂₁) mg/kg
T-250-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.84	0.661	5.501
T-250-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	483	3.77	486.77
T-250-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.45	0.793	4.243
T-250-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	20.7	1.23	21.93
T-250-7-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	16.4	2.39	18.79
T-500-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.854	0.525	1.379
T-500-2D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.76	1.72	3.48
T-500-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	279	4.01	283.01
T-500-4D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.753	0.658	1.411
T-500-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.596	0.769	1.365
T-500-6D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.529	0.983	1.512
T-500-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.796	0.677	1.473
T-500-8D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.15	0.513	1.663
T-1000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.94	0.561	2.501
T-1000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.85	0.889	2.739
T-1000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-1000-5-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-1000-5D4	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-1000-5-D4d	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.306	0.598	0.904
T-1000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.874	0.566	1.44
T-3000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.322	0.546	0.868
T-3000-1-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-3000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.568	0.871	1.439
T-3000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-3000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.398	0.722	1.12
T-6000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.313	0.843	1.156
T-6000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.324	0.518	0.842
T-6000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-6000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-20000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-20000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50

TABLE 3a: Polycyclic Aromatic Hydrocarbons at Thebaud Drill Site - Spring 2000 (Continued)

Unique_station_id	Replicate_id	Indeno(1,2,3-cd)pyrene mg/kg	Dibenzo(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
T-250-1D4		< 0.05	< 0.05	< 0.05
T-250-3D4		< 0.05	< 0.05	< 0.05
T-250-5D4		< 0.05	< 0.05	< 0.05
T-250-7D4		< 0.05	< 0.05	< 0.05
T-250-7-D4	Field Dup	< 0.05	< 0.05	< 0.05
T-500-1D4		< 0.05	< 0.05	< 0.05
T-500-2D4		< 0.05	< 0.05	< 0.05
T-500-3D4		< 0.05	< 0.05	< 0.05
T-500-4D4		< 0.05	< 0.05	< 0.05
T-500-5D4		< 0.05	< 0.05	< 0.05
T-500-6D4		< 0.05	< 0.05	< 0.05
T-500-7D4		< 0.05	< 0.05	< 0.05
T-500-8D4		< 0.05	< 0.05	< 0.05
T-1000-1D4		< 0.05	< 0.05	< 0.05
T-1000-3D4		< 0.05	< 0.05	< 0.05
T-1000-5D4		< 0.05	< 0.05	< 0.05
T-1000-5-D4	Field Dup	< 0.05	< 0.05	< 0.05
T-1000-5D4	Lab Dup.	< 0.05	< 0.05	< 0.05
T-1000-5-D4d	Lab Dup.	< 0.05	< 0.05	< 0.05
T-1000-7D4		< 0.05	< 0.05	< 0.05
T-3000-1D4		< 0.05	< 0.05	< 0.05
T-3000-1-D4	Field Dup	< 0.05	< 0.05	< 0.05
T-3000-3D4		< 0.05	< 0.05	< 0.05
T-3000-5D4		< 0.05	< 0.05	< 0.05
T-3000-7D4		< 0.05	< 0.05	< 0.05
T-6000-1D4		< 0.05	< 0.05	< 0.05
T-6000-3D4		< 0.05	< 0.05	< 0.05
T-6000-5D4		< 0.05	< 0.05	< 0.05
T-6000-7D4		< 0.05	< 0.05	< 0.05
T-20000-3D4		< 0.05	< 0.05	< 0.05
T-20000-7D4		< 0.05	< 0.05	< 0.05

TABLE 4a: Sediment Quality at Thebaud Drill Site - Spring 2000

Unique station_id	Replicate_id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
T-250-1D4		0.1	< 0.1	0.2	< 0.1	99.1	< 0.1	0.9	15	29
T-250-3D4		0.5	0.1	0.4	< 0.1	97.7	0.9	1.4	17	30
T-250-5D4		0.4	0.2	0.2	< 0.1	98.9	0.1	1	17	0
T-250-7D4		0.2	< 0.1	0.2	< 0.1	99	0.1	0.9	17	30
T-250-7-D4	Field Dup.	0.2	< 0.1	0.2	< 0.1	99.1	0.1	0.8	17	0
T-500-1D4		0.2	< 0.1	0.2	< 0.1	99	0.1	0.9	19	23
T-500-2D4		0.5	0.1	0.4	< 0.1	98.9	0.1	1.1	18	27
T-500-3D4		0.6	0.1	0.5	< 0.1	98.6	0.2	1.1	19	31
T-500-4D4		0.3	0.1	0.2	1.6	97.5	0.1	0.8	14	30
T-500-5D4		0.4	0.1	0.3	< 0.1	98.8	0.2	1	17	30
T-500-6D4		0.2	< 0.1	0.2	< 0.1	98.9	0.2	0.9	18	29
T-500-7D4		0.2	0.1	0.1	< 0.1	99.1	< 0.1	0.9	17	28
T-500-8D4		0.2	0.1	0.1	< 0.1	99.1	0.1	0.9	16	27
T-1000-1D4		0.2	< 0.1	0.2	0.2	98.9	0.1	0.8	17	26
T-1000-3D4		0.3	< 0.1	0.3	0.3	98.8	0.1	0.9	16	30
T-1000-5D4		0.2	< 0.1	0.2	2	97.3	< 0.1	0.7	13	30
T-1000-5-D4	Field Dup.	0.1	< 0.1	0.1	0.5	99	< 0.1	0.5	13	0
T-1000-5D4	Lab Dup.	0.2	< 0.1	0.2	2.4	96.9	0.1	0.7	15	0
T-1000-5-D4d	Lab Dup.	0.1	< 0.1	0.1	0.3	99.1	< 0.1	0.6	13	0
T-1000-7D4		0.2	< 0.1	0.2	< 0.1	99.1	0.1	0.8	18	27
T-3000-1D4		0.2	0.1	0.1	< 0.1	99.2	< 0.1	0.8	17	27
T-3000-1-D4	Field Dup.	0.2	0.1	0.1	< 0.1	99.2	< 0.1	0.8	17	0
T-3000-3D4		0.2	< 0.1	0.2	< 0.1	98.9	0.1	1	18	29
T-3000-5D4		0.5	0.1	0.4	< 0.1	98.8	0.2	1	19	33
T-3000-7D4		0.2	< 0.1	0.2	0.1	99	0.1	0.9	17	33
T-6000-1D4		0.2	< 0.1	0.2	0.2	98.9	< 0.1	0.8	16	15
T-6000-3D4		0.2	< 0.1	0.2	< 0.1	99.1	0.1	0.8	16	27
T-6000-5D4		0.8	0.2	0.6	< 0.1	98.4	0.4	1.2	19	41
T-6000-7D4		< 0.1	< 0.1	< 0.1	0.2	99	< 0.1	0.8	14	33
T-20000-3D4		1.1	0.2	0.9	< 0.1	98.4	0.3	1.2	20	39
T-20000-7D4		0.3	0.1	0.2	0.1	99.1	< 0.1	0.8	15	35

TABLE 5a: Toxicity at Thebaud Drill Site - Spring 2000

Unique_station_id	Replicate_id	Amphipod Survival Mortality %	Microtox EC50
T-250-1D4		2	> 98684mg/L
T-250-3D4		64	64205 mg/L
T-250-5D4		5	> 98684mg/L
T-250-7D4		3	> 98684mg/L
T-250-7-D4 dup	Field Dup.	8	> 98684mg/L
T-500-1D4		4	> 98684mg/L
T-500-2D4		9	> 98684mg/L
T-500-3D4		1	> 98684mg/L
T-500-4D4		2	> 98684mg/L
T-500-5D4		1	> 98684mg/L
T-500-6D4		0	> 98684mg/L
T-500-7D4		1	> 98684mg/L
T-500-8D4		7	> 98684mg/L
T-1000-1D4		3	> 98684mg/L
T-1000-3D4		4	> 98684mg/L
T-1000-5D4		5	> 98684mg/L
T-1000-5-D4	Field Dup.	4	> 98684mg/L
T-1000-5D4	Lab Dup.		
T-1000-5-D4d	Lab Dup.		
T-1000-7D4		3	
T-3000-1D4			
T-3000-1-D4	Field Dup.		
T-3000-3D4			
T-3000-5D4			
T-3000-7D4			
T-6000-1D4			
T-6000-3D4			
T-6000-5D4			
T-6000-7D4			
T-20000-3D4		1	> 98684mg/L
T-20000-7D4		12	> 98684mg/L

**Laboratory Analytical Results
for Sediment from Thebaud Field, November 2000**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at Thebaud Drill Site - Fall 2000

Unique station id	Replicate id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
T-250-1-D5		8800	<2	<2	190	<5	<0.3	7	1	2	5200	4.9	<5
T-250-1-D5	Lab Dup.	8300	<2	<2	200	<5	<0.3	7	1	2	5000	4.9	<5
T-250-2-D5		12000	<2	2	250	<5	<0.3	9	1	2	6000	6	<5
T-250-3-D5		12000	<2	<2	890	<5	<0.3	6	1	2	3700	5.5	<5
T-250-4-D5		12000	<2	<2	340	<5	<0.3	8	1	<2	4700	5.5	<5
T-250-5-D5		12000	<2	2	210	<5	<0.3	7	1	<2	4000	4.7	<5
T-250-6-D5		11000	<2	2	190	<5	<0.3	8	1	<2	4800	4.9	<5
T-250-7-D5		11000	<2	2	220	<5	<0.3	7	1	2	4100	4.9	<5
T-250-8-D5		11000	<2	2	360	<5	<0.3	9	1	2	5900	5.9	<5
T-500-1-D5		8700	<2	<2	170	<5	<0.3	7	1	3	4200	6.1	<5
T-500-2-D5		13000	<2	2	240	<5	<0.3	10	1	2	6500	6.7	<5
T-500-3-D5		16000	<2	2	670	<5	<0.3	10	1	2	5300	15	<5
T-500-3-D5	Lab Dup.	16000	<2	2	660	<5	<0.3	9	1	3	5200	6.3	<5
T-500-4-D5		6300	<2	<2	120	<5	<0.3	4	<1	<2	2300	2.6	<5
T-500-5-D5		12000	<2	2	220	<5	<0.3	8	1	2	5300	5.4	<5
T-500-6-D5		11000	<2	2	190	<5	<0.3	13	2	4	11000	7.5	<5
T-500-7-D5		10000	<2	2	210	<5	<0.3	8	1	<2	5400	5.6	<5
T-500-8-D5		8500	<2	<2	170	<5	<0.3	6	1	<2	3800	4.4	<5
T-1000-1-D5		7000	<2	<2	140	<5	<0.3	4	<1	<2	2200	3.1	<5
T-1000-3-D5		6300	<2	<2	130	<5	<0.3	3	<1	<2	1900	2.7	<5
T-1000-5-D5		9500	<2	<2	210	<5	<0.3	5	1	<2	2900	4	<5
T-1000-7-D5		8600	<2	<2	170	<5	<0.3	7	<1	<2	3800	4.5	<5
T-3000-1-D5		7200	<2	<2	170	<5	<0.3	6	1	<2	3000	3.9	<5
T-3000-1-D5	Lab Dup.	7000	<2	<2	160	<5	<0.3	5	1	2	2600	3.7	<5
T-3000-3-D5		12000	<2	2	220	<5	<0.3	11	1	<2	5800	6.1	<5
T-3000-5-D5		15000	<2	2	270	<5	<0.3	9	1	2	4700	6.1	<5
T-3000-7-D5		8000	<2	<2	170	<5	<0.3	5	1	<2	2500	3.8	<5
T-6000-1-D5		8700	<2	<2	180	<5	<0.3	8	1	2	4600	5.2	<5
T-6000-3-D5		8000	<2	<2	180	<5	<0.3	6	1	<2	2900	3.9	<5
T-6000-5-D5		17000	<2	3	290	<5	<0.3	12	2	3	6700	6.9	<5
T-6000-7-D5		5900	<2	2	100	<5	<0.3	4	1	<2	3000	2.5	<5
T-20000-3-D5		6600	<2	2	120	<5	<0.3	5	1	<2	4300	3.1	<5
T-20000-7-D5		15000	<2	3	270	<5	<0.3	12	2	2	6200	7.1	<5

TABLE 1b: Trace Elements at Thebaud Drill Site - Fall 2000

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Thi mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
T-250-1-D5		160	< 2	< 0.01	< 2	< 2	42	0.1	< 2	0.3	14	12
T-250-1-D5	Lab Dup.	140	< 2	< 0.01	< 2	< 2	42	0.1	< 2	0.3	12	10
T-250-2-D5		150	< 2	< 0.01	2	< 2	56	0.1	< 2	0.3	14	11
T-250-3-D5		48	< 2	< 0.01	2	< 2	70	0.1	< 2	0.2	8	7
T-250-4-D5		92	< 2	< 0.01	2	< 2	58	0.1	< 2	0.3	11	9
T-250-5-D5		73	< 2	< 0.01	2	< 2	50	0.1	< 2	0.2	10	7
T-250-6-D5		110	< 2	< 0.01	2	< 2	50	0.1	< 2	0.3	11	11
T-250-7-D5		78	< 2	< 0.01	2	< 2	49	0.1	< 2	0.3	10	9
T-250-8-D5		140	< 2	< 0.01	2	< 2	50	0.1	< 2	0.3	14	10
T-500-1-D5		100	< 2	< 0.01	< 2	< 2	38	0.1	< 2	0.3	10	10
T-500-2-D5		170	< 2	< 0.01	2	< 2	57	0.2	< 2	0.4	16	13
T-500-3-D5		60	< 2	< 0.01	2	< 2	77	0.2	< 2	0.3	11	9
T-500-3-D5	Lab Dup.	56	< 2	< 0.01	2	< 2	76	0.2	< 2	0.3	11	9
T-500-4-D5		22	< 2	< 0.01	< 2	< 2	26	< 0.5	< 2	0.1	5	6
T-500-5-D5		120	< 2	< 0.01	2	< 2	50	0.2	< 2	0.3	12	9
T-500-6-D5		400	< 2	< 0.01	2	< 2	50	0.1	< 2	0.9	26	20
T-500-7-D5		150	< 2	< 0.01	2	< 2	47	0.1	< 2	0.3	14	10
T-500-8-D5		96	< 2	< 0.01	< 2	< 2	40	0.1	< 2	0.2	10	10
T-1000-1-D5		28	< 2	< 0.01	< 2	< 2	32	0.1	< 2	0.2	6	8
T-1000-3-D5		28	< 2	< 0.01	< 2	< 2	29	0.2	< 2	0.1	4	6
T-1000-5-D5		35	< 2	< 0.01	< 2	< 2	42	0.2	< 2	0.3	7	5
T-1000-7-D5		94	< 2	< 0.01	< 2	< 2	40	0.1	< 2	0.3	10	7
T-3000-1-D5		59	< 2	< 0.01	< 2	< 2	38	0.1	< 2	0.2	8	9
T-3000-1-D5	Lab Dup.	52	< 2	< 0.01	< 2	< 2	34	0.1	< 2	0.2	7	8
T-3000-3-D5		150	< 2	< 0.01	2	< 2	58	0.1	< 2	0.3	14	11
T-3000-5-D5		76	< 2	< 0.01	2	< 2	65	0.2	< 2	0.3	11	8
T-3000-7-D5		36	< 2	< 0.01	< 2	< 2	38	0.1	< 2	0.2	7	8
T-6000-1-D5		150	< 2	< 0.01	< 2	< 2	39	0.1	< 2	0.3	12	11
T-6000-3-D5		56	< 2	< 0.01	< 2	< 2	38	0.1	< 2	0.2	7	9
T-6000-5-D5		130	< 2	< 0.01	2	< 2	70	0.2	< 2	0.5	14	11
T-6000-7-D5		23	< 2	< 0.01	< 2	< 2	27	0.1	< 2	0.2	8	6
T-20000-3-D5		60	< 2	< 0.01	< 2	< 2	30	0.1	< 2	0.2	10	8
T-20000-7-D5		150	< 2	< 0.01	3	< 2	65	0.2	< 2	0.5	15	12

TABLE 2b: Petroleum Hydrocarbons at Thebaud Drill Site - Fall 2000

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₄ -C ₁₀ mg/kg	C ₁₁ -C ₂₀ mg/kg	C ₂₁ -C ₃₀ mg/kg	TEH (C ₁₁ -C ₃₀) mg/kg
T-250-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.602	1.2	1.80
T-250-1-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.06	< 0.25	1.06
T-250-2-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.68	< 0.25	2.68
T-250-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	441	8.35	449.35
T-250-4-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	13.2	1.08	14.28
T-250-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.305	0.85	1.16
T-250-6-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-250-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.941	0.345	1.29
T-250-8-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	16.9	5.9	22.80
T-500-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-500-2-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.357	< 0.25	0.36
T-500-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	35	1.88	36.88
T-500-3-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	51.9	1.85	53.75
T-500-4-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-500-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.617	0.351	0.97
T-500-6-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-500-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.976	< 0.25	0.98
T-500-8-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-1000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-1000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.357	< 0.25	0.36
T-1000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-1000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-3000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-3000-1-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-3000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-3000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-3000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-6000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-6000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-6000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-6000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-20000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
T-20000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50

TABLE 3b: Polycyclic Aromatic Hydrocarbons at Thebaud Drill Site - Fall 2000 (Continued)

Unique_station_id	Replicate_id	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
T-250-1-D5		< 0.05	< 0.05	< 0.05
T-250-1-D5	Lab Dup.	< 0.05	< 0.05	< 0.05
T-250-2-D5		< 0.05	< 0.05	< 0.05
T-250-3-D5		< 0.05	< 0.05	< 0.05
T-250-4-D5		< 0.05	< 0.05	< 0.05
T-250-5-D5		< 0.05	< 0.05	< 0.05
T-250-6-D5		< 0.05	< 0.05	< 0.05
T-250-7-D5		< 0.05	< 0.05	< 0.05
T-250-8-D5		< 0.05	< 0.05	< 0.05
T-500-1-D5		< 0.05	< 0.05	< 0.05
T-500-2-D5		< 0.05	< 0.05	< 0.05
T-500-3-D5		< 0.05	< 0.05	< 0.05
T-500-3-D5	Lab Dup.	< 0.05	< 0.05	< 0.05
T-500-4-D5		< 0.05	< 0.05	< 0.05
T-500-5-D5		< 0.05	< 0.05	< 0.05
T-500-6-D5		< 0.05	< 0.05	< 0.05
T-500-7-D5		< 0.05	< 0.05	< 0.05
T-500-8-D5		< 0.05	< 0.05	< 0.05
T-1000-1-D5				
T-1000-3-D5				
T-1000-5-D5				
T-1000-7-D5				
T-3000-1-D5				
T-3000-1-D5	Lab Dup.			
T-3000-3-D5				
T-3000-5-D5				
T-3000-7-D5				
T-6000-1-D5				
T-6000-3-D5				
T-6000-5-D5				
T-6000-7-D5				
T-20000-3-D5				
T-20000-7-D5				

TABLE 4b: Sediment Quality at Thebaud Drill Site - Fall 2000

Unique_station_id	Replicate_id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
T-250-1-D5		0.4	0.2	0.2	< 0.1	99.1	0.1	0.8	17	29
T-250-1-D5	Lab Dup.	0.4	0.2	0.2	< 0.1	99	0.1	0.8	17	29
T-250-2-D5		0.3	0.2	0.1	< 0.1	99	0.1	0.9	18	31
T-250-3-D5		0.6	0.4	0.2	< 0.1	98.6	0.3	1.2	21	35
T-250-4-D5		0.3	0.2	0.1	< 0.1	98.9	0.1	0.9	19	37
T-250-5-D5		0.3	0.2	0.1	< 0.1	98.9	0.1	1	18	33.5
T-250-6-D5		0.3	0.2	0.1	< 0.1	99	0.1	0.8	18	31
T-250-7-D5		0.3	0.2	0.1	< 0.1	99.1	1.9	0.9	17	31
T-250-8-D5		0.3	0.2	0.1	< 0.1	98.9	0.2	0.9	17	28
T-500-1-D5		0.2	0.2	< 0.1	< 0.1	99.1	0.1	0.8	17	31
T-500-2-D5		0.3	0.2	0.1	< 0.1	99	< 0.1	1	16	27
T-500-3-D5		0.5	0.4	0.1	< 0.1	98.6	0.1	1.2	20	35
T-500-3-D5	Lab Dup.	0.4	0.4	< 0.1	< 0.1	98.6	0.3	1.1	19	35
T-500-4-D5		0.4	0.4	< 0.1	0.5	98.6	0.1	0.8	13	37
T-500-5-D5		0.2	0.2	< 0.1	< 0.1	98.9	0.1	1	19	
T-500-6-D5		0.2	0.2	< 0.1	< 0.1	99.1	0.1	0.9	17	31
T-500-7-D5		0.2	0.2	< 0.1	0.1	98.9	0.1	0.8	18	37.2
T-500-8-D5		0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	17	31
T-1000-1-D5		0.3	0.2	0.1	0.2	98.9	< 0.1	0.9	17	22
T-1000-3-D5		0.3	0.2	0.1	0.2	98.9	< 0.1	0.9	16	28
T-1000-5-D5		0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	18	26
T-1000-7-D5		0.3	0.2	0.1	< 0.1	99.1	< 0.1	0.9	17	30
T-3000-1-D5		0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	18	17
T-3000-1-D5	Lab Dup.	0.2	0.2	< 0.1	< 0.1	99.1	< 0.1	0.9	17	17
T-3000-3-D5		0.3	0.2	0.1	< 0.1	99	< 0.1	1	18	30-34
T-3000-5-D5		0.5	0.4	0.1	< 0.1	98.9	< 0.1	1.1	18	36
T-3000-7-D5		0.2	0.2	< 0.1	< 0.1	99.3	< 0.1	0.7	16	27
T-6000-1-D5		0.2	0.2	< 0.1	< 0.1	98.9	3.8	1.1	18	17
T-6000-3-D5		0.2	0.2	< 0.1	0.2	99	< 0.1	0.9	16	34
T-6000-5-D5		1	0.7	0.3	< 0.1	98.7	0.2	1.1	19	39
T-6000-7-D5		0.2	0.2	< 0.1	0.1	98.8	0.5	0.7	15	22
T-20000-3-D5		0.6	0.2	0.4	2	97.2	< 0.1	0.8	15	39
T-20000-7-D5		1.4	1	0.4	< 0.1	97.5	0.9	1.5	22	23.5

TABLE 5b: Toxicity at Thebaud Drill Site - Fall 2000

Unique_station_id	Replicate_id	Amphipod Survival Mortality %	Microtox EC50
T-250-1-D5		5	>98684
T-250-1-D5	Lab Dup.		
T-250-2-D5		3	>98684
T-250-3-D5		43	>98684
T-250-4-D5		6	>98684
T-250-5-D5		5	>98684
T-250-6-D5		15	>98684
T-250-7-D5		5	>98684
T-250-8-D5		6	>98684
T-500-1-D5		4	>98684
T-500-2-D5		3	>98684
T-500-3-D5		1	>98684
T-500-3-D5	Lab Dup.		
T-500-4-D5		18	>98684
T-500-5-D5		10	>98684
T-500-6-D5		13	>98684
T-500-7-D5		13	>98684
T-500-8-D5		12	>98684
T-1000-1-D5		21	>98684
T-1000-3-D5		16	>98684
T-1000-5-D5		11	>98684
T-1000-7-D5		15	>98684
T-3000-1-D5			
T-3000-1-D5	Lab Dup.		
T-3000-3-D5			
T-3000-5-D5			
T-3000-7-D5			
T-6000-1-D5			
T-6000-3-D5			
T-6000-5-D5			
T-6000-7-D5			
T-20000-3-D5		10	>98684
T-20000-7-D5		13	>98684

**Laboratory Analytical Results
for Sediment from Thebaud Field, June 2001**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Toxicity

TABLE 1: Trace Elements at Thebaud Gas Field - Spring 2001

Unique_station_id	Sulphide	Barium	Ammonia
	mg/kg	mg/kg	mg/kg
T-250-1	<20	240	6.32
T-250-3	<20	790	3.25
T-250-5	<20	220	4.79
T-250-7	<20	210	3.32
T-500-1	<20	180	1.63
T-500-3	<20	1200	<0.25
T-500-5	<20	240	0.94
T-500-7	<20	150	4.93
T-1000-1	<20	160	0.68
T-1000-3	<20	190	4.52
T-1000-5	<20	120	1.24
T-1000-7	<20	200	0.6
T-3000-1		160	
T-3000-1-Field Dup		160	
T-3000-3		240	
T-3000-5		270	
T-3000-7		140	
T-6000-1		180	
T-6000-3		140	
T-6000-5		300	
T-6000-5-Lab Dup		310	
T-6000-7		110	
T-20000-3		300	
T-20000-7		97	

TABLE 2: Petroleum Hydrocarbons at Thebaud Gas Field - Spring 2001

Unique_station_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₂₀ mg/kg	C ₂₁ -C ₃₁ mg/kg	TEH (C ₁₁ -C ₃₁) mg/kg
T-250-1	<0.025	<0.025	<0.025	<0.050	<2.5	0.712	0.812	<3.0
T-250-3	<0.025	<0.025	<0.025	<0.050	<2.5	356	3.25	360
T-250-5	<0.025	<0.025	<0.025	<0.050	<2.5	0.402	0.451	<3.0
T-250-7	<0.025	<0.025	<0.025	<0.050	<2.5	1.72	0.744	<3.0
T-500-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.537	<3.0
T-500-3	<0.025	<0.025	<0.025	<0.050	<2.5	557	7.89	564
T-500-5	<0.025	<0.025	<0.025	<0.050	<2.5	0.89	0.622	<3.0
T-500-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.386	<3.0
T-1000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.427	<3
T-1000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.366	<3.0
T-1000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.44	<3.0
T-1000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.386	<3.0
T-3000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.37	<3.0
T-3000-1-Field Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.366	<3.0
T-3000-3	<0.025	<0.025	<0.025	<0.050	<2.5	0.309	0.494	<3.0
T-3000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.531	<3.0
T-3000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.41	<3.0
T-6000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.366	<3.0
T-6000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.446	<3.0
T-6000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.962	<3.0
T-6000-5-Lab Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.658	<3.0
T-6000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.476	<3.0
T-20000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.649	<3.0
T-20000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.525	<3.0

TABLE 3: Toxicity at Thebaud Gas Field - Spring 2001

Unique_station_id	Amphipod Survival Mortality %
T-250-1	1
T-250-3	46
T-250-5	3
T-250-7	1
T-500-1	2
T-500-3	30
T-500-5	2
T-500-7	6
T-1000-1	5
T-1000-3	3
T-1000-5	2
T-1000-7	3

**Laboratory Analytical Results
for Sediment from Thebaud Field, July 2002**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Toxicity

TABLE 1: Trace Elements at Thebaud Gas Field - Summer 2002

Unique_station_id	Sulphide	Barium	Ammonia
	mg/kg	mg/kg	mg/kg
T-250-1	<20	230	0.55
T-250-3	120	1200	<0.31
T-250-5	<20	230	1.44
T-250-7	<20	240	0.93
T-500-1	<20	180	0.62
T-500-3	170	810	14.1
T-500-5	<20	260	2.04
T-500-7	<20	190	0.3
T-1000-1	<20	110	0.54
T-1000-1 - Lab Dup	<20	120	<0.3
T-1000-3	<20	130	0.49
T-1000-5	<20	100	0.64
T-1000-7	<20	180	1.22
T-3000-1	<20	170	0.72
T-3000-3	<20	240	0.74
T-3000-3 - Field Dup	<20	240	0.79
T-3000-5	<20	260	6.17
T-3000-7	<20	160	0.66
T-6000-1	<20	120	0.36
T-6000-3	<20	130	0.36
T-6000-5	<20	280	4.32
T-6000-7	<20	110	0.76
T-20000-3	22	270	34.9
T-20000-7	<20	88	0.35
T-20000-7 - Lab Dup	<20	75	0.54

TABLE 2: Petroleum Hydrocarbons at Thebaud Gas Field - Summer 2002

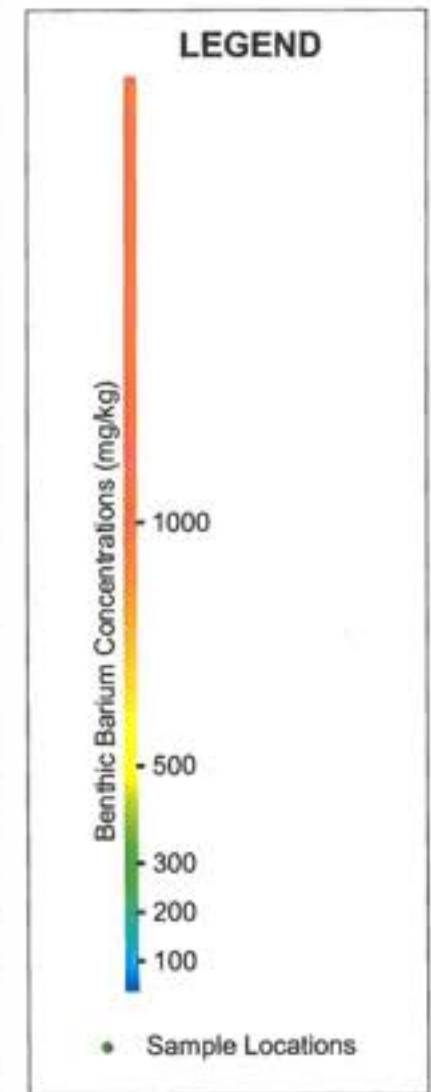
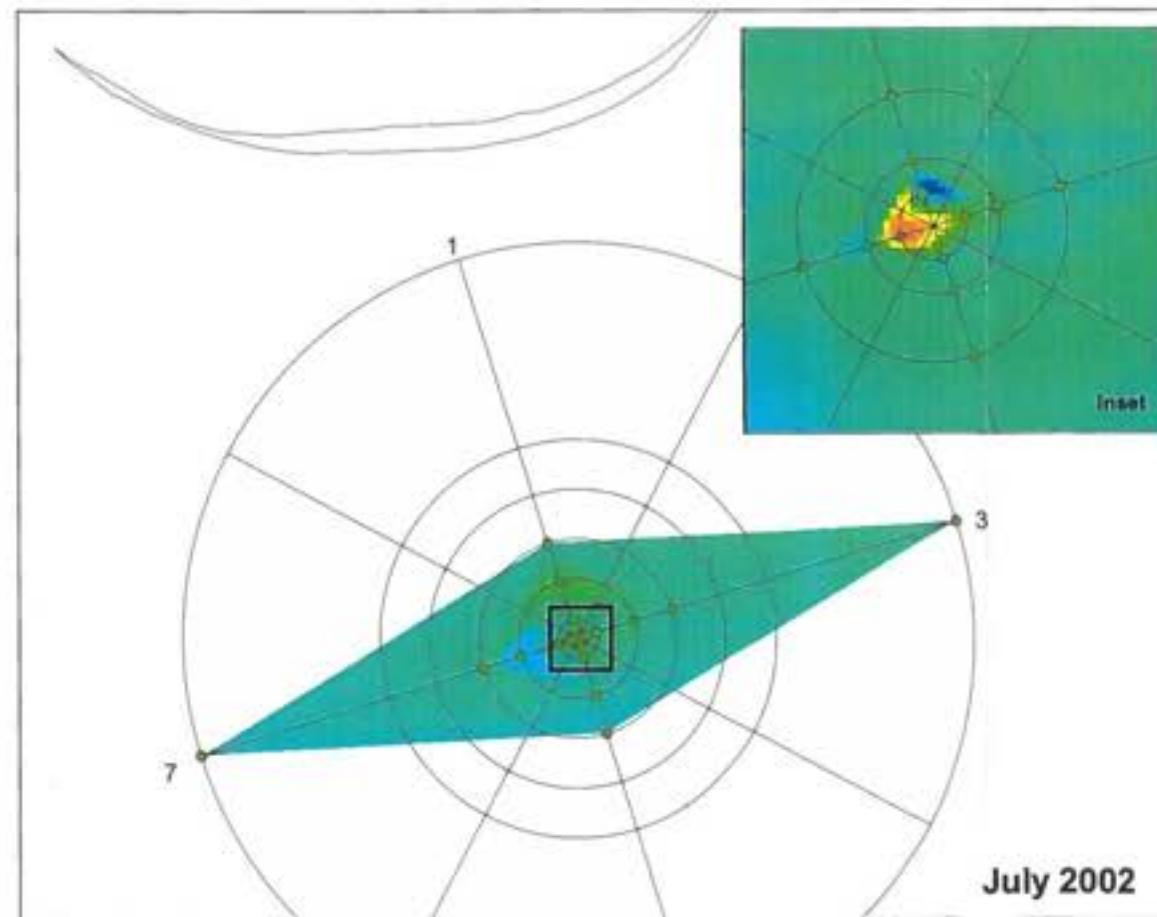
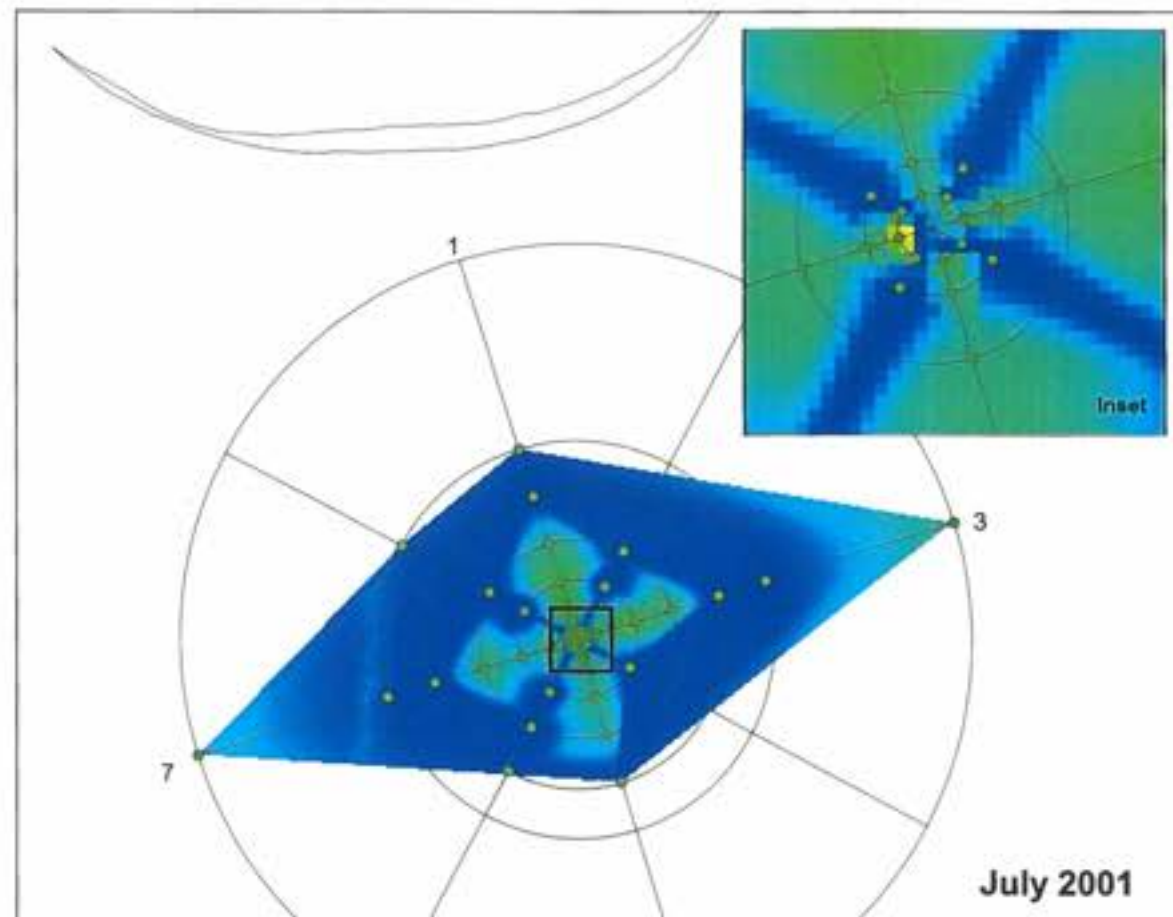
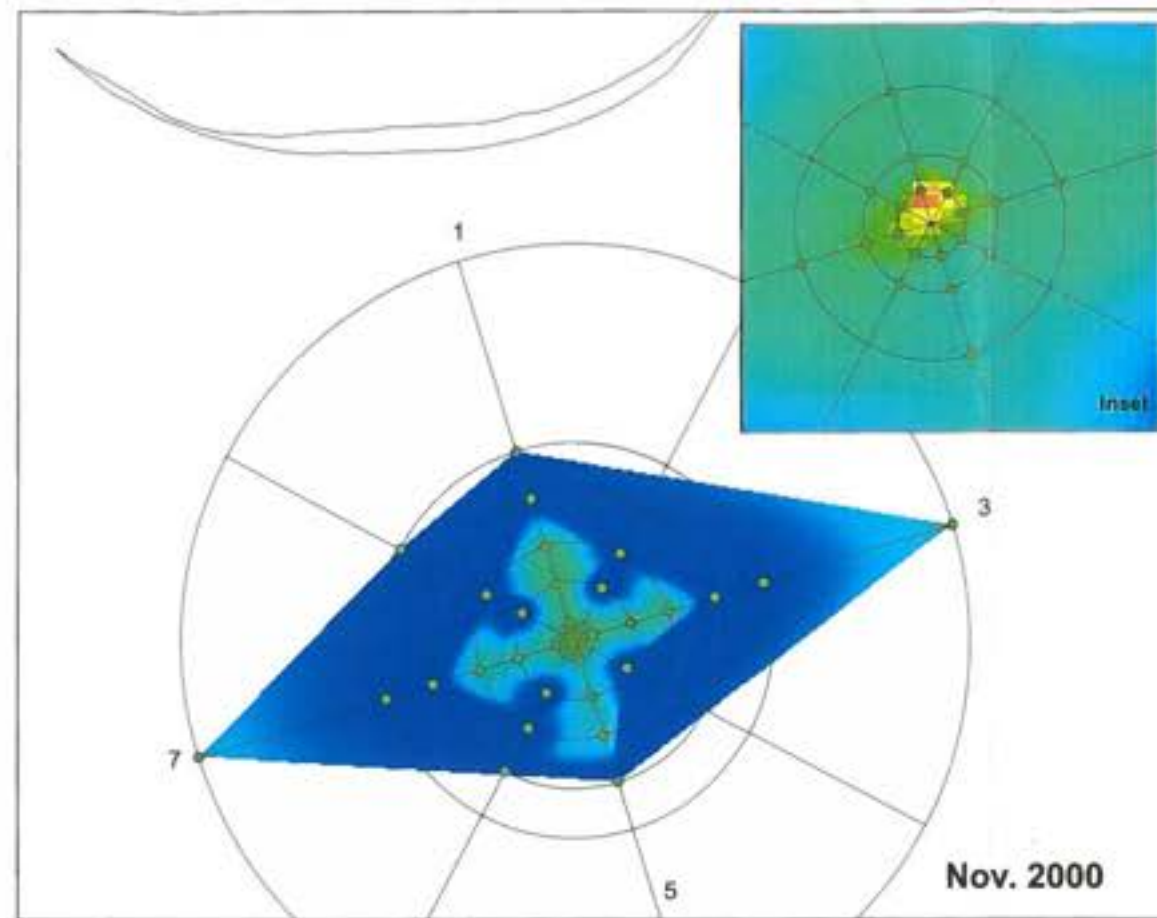
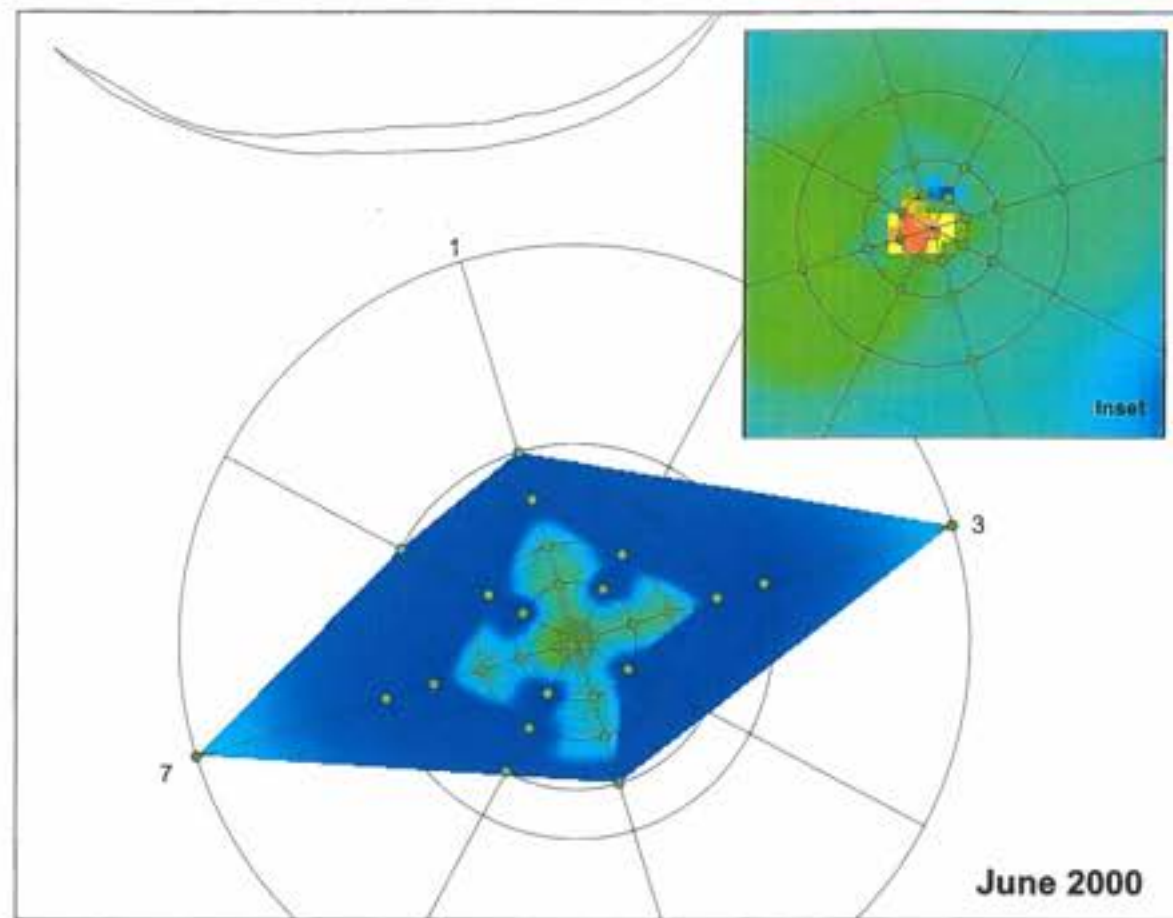
Unique_station_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₉ -C ₁₀ mg/kg	C ₁₁ -C ₁₀ mg/kg	C ₁₁ -C ₁₂ mg/kg	TEH (C ₁₁ -C ₁₂) mg/kg
T-250-1	<0.025	<0.025	<0.025	<0.050		0.874	<0.250	
T-250-3	<0.025	<0.025	<0.025	<0.050		457	11.6	
T-250-5	<0.025	<0.025	<0.025	<0.050		<0.250	<0.250	
T-250-7	<0.025	<0.025	<0.025	<0.050		0.42	<0.250	
T-500-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-500-3	<0.025	<0.025	<0.025	<0.050	<2.5	142	4.05	
T-500-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-500-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-1000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-1000-1 - Lab Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-1000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-1000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-1000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-3000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-3000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-3000-3 - Field Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.343	
T-3000-5	<0.025	<0.025	<0.025	<0.050	<2.5	0.347	0.599	
T-3000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-6000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.298	
T-6000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-6000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.859	
T-6000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-20000-3	<0.025	<0.025	<0.025	<0.050	<2.5	0.893	1.06	
T-20000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	
T-20000-7 - Lab Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	<0.250	

TABLE 3: Toxicity at Thebaud Gas Field - Summer 2002

Unique_station_id	Amphipod Survival
	Mortality %
T-250-1	2
T-250-3	47
T-250-3 Dup	44
T-250-3 Dup	47
T-250-3 Dup	44
T-250-5	1
T-250-7	2
T-500-1	4
T-500-3	7
T-500-5	1
T-500-7	3
T-1000-3	1
T-1000-5	7
T-1000-1	6
T-1000-7	10

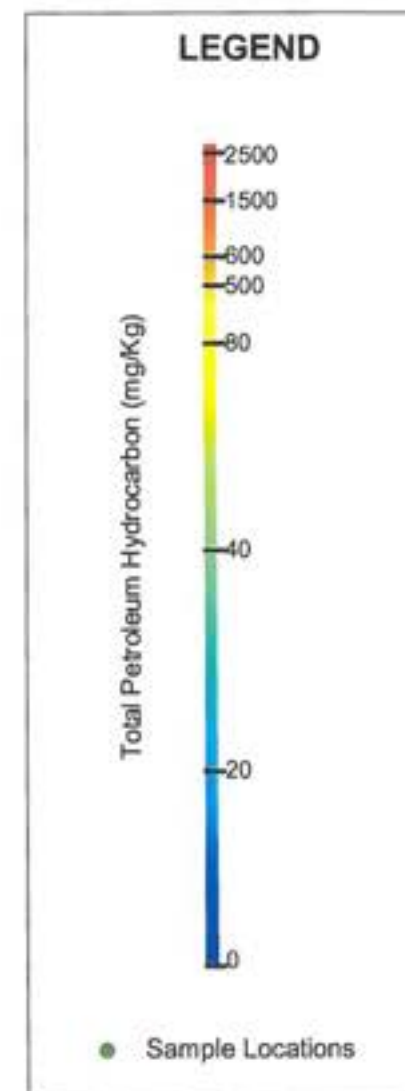
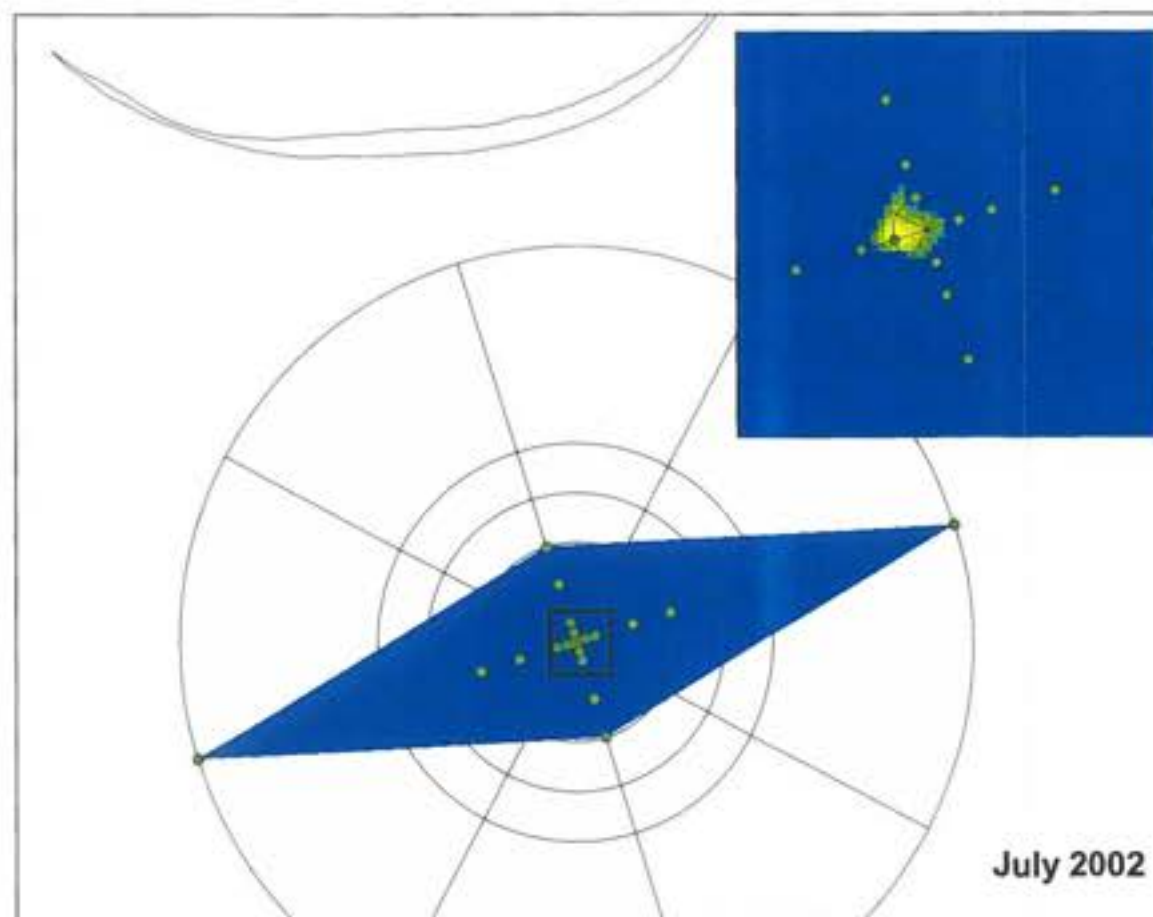
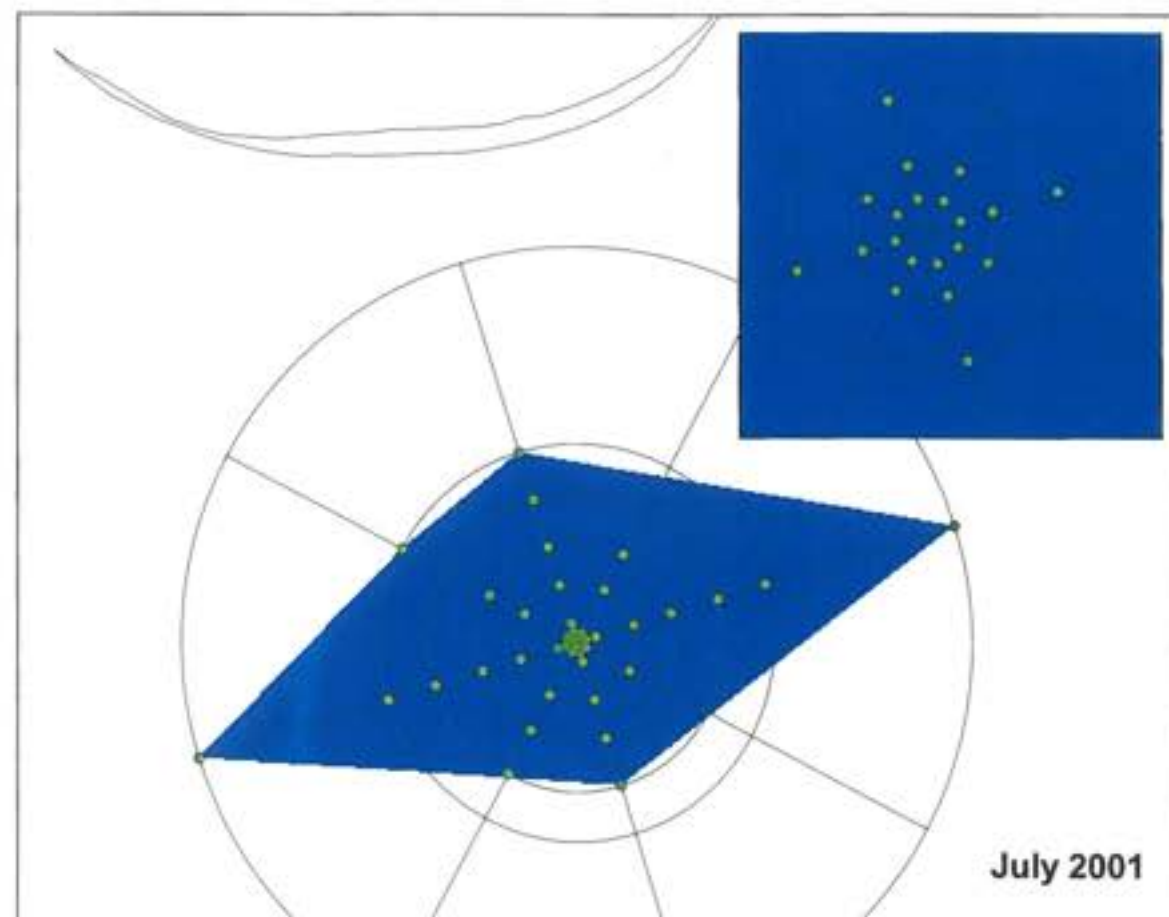
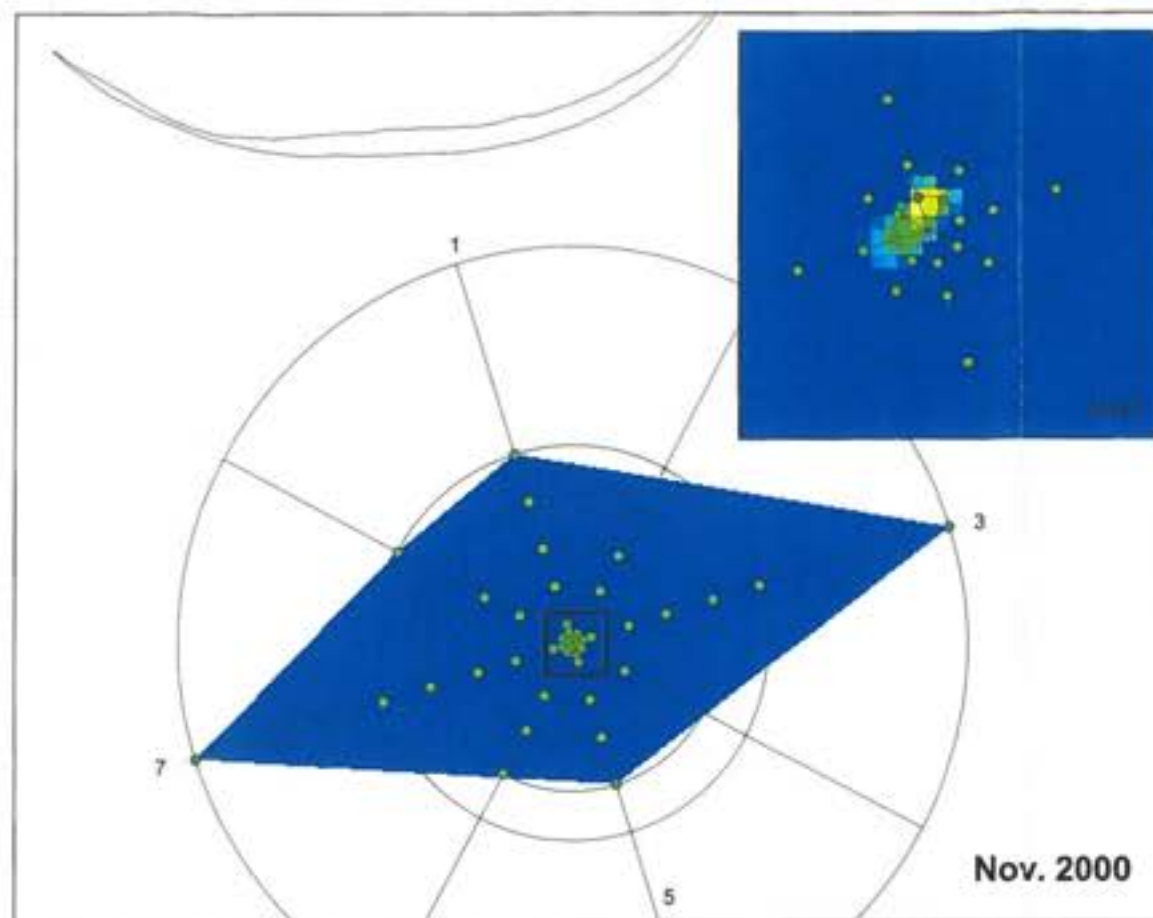
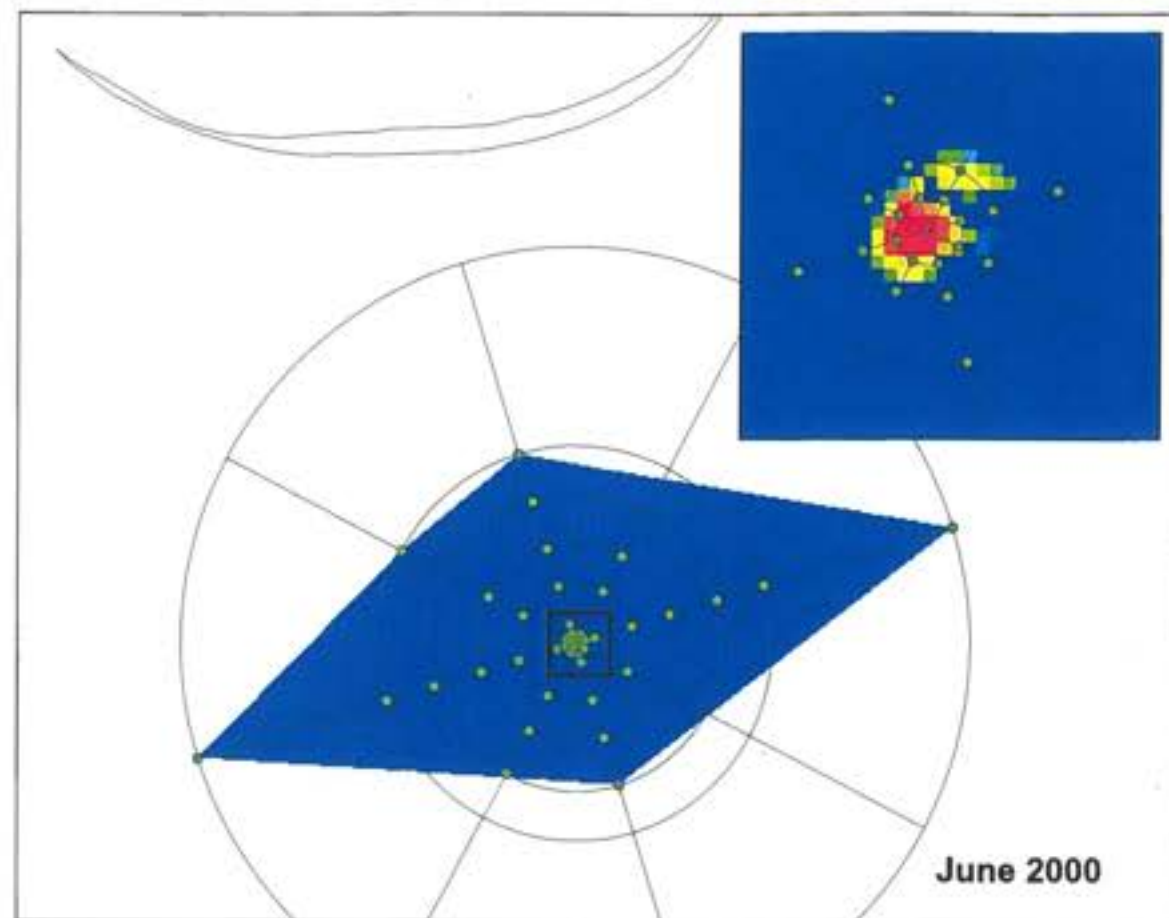
**Laboratory Analytical Results
for Sediment from North Triumph Field**

- November 1998 Data
- June 1999 Data
- November 1999 Data
- June 2000 Data
- November 2000 Data
- June 2001 Data



Appendix B (2 of 2)
SEDIMENT BARIUM
CONCENTRATIONS

North Triumph Well



**Appendix B (2 of 2)
TOTAL PETROLEUM
HYDROCARBONS IN
SEDIMENT**

North Triumph Well



**Jacques Whitford
Environment Limited**

**Laboratory Analytical Results
for Sediment from North Triumph Field, November 1998**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1a: Trace Elements at North Triumph Drill Site - November 1998

Unique_studio_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
NT-250-1		9360	<2	<2	140	<5	<5	<0.3	4	1	<2	2200	4.1	<5
NT-250-3		14200	<2	2	200	<5	<5	<0.3	8	1	2	4210	6.5	<5
NT-250-5		13500	<2	2	190	<5	<5	<0.3	7	1	2	4060	6.6	<5
NT-250-7		9610	<2	<2	150	<5	<5	<0.3	4	1	<2	2300	4.3	<5
NT-250-7	Field Dup.	9440	<2	<2	140	<5	<5	<0.3	5	1	<2	2570	4.7	<5
NT-500-1		10700	<2	<2	180	<5	<5	<0.3	6	1	4	3300	5	<5
NT-500-3		13400	<2	2	200	<5	<5	<0.3	8	1	2	4200	6.5	<5
NT-500-3	Lab Dup.													
NT-500-5		11300	<2	<2	170	<5	<5	<0.3	5	1	<2	3000	5.1	<5
NT-500-7		12200	<2	<2	180	<5	<5	<0.3	5	1	<2	2800	5.3	<5
NT-1000-1		12100	<2	2	180	<5	<5	<0.3	6	1	<2	3370	4.9	<5
NT-1000-1	Field Dup.	12400	<2	2	180	<5	<5	<0.3	7	1	2	3800	5.5	<5
NT-1000-3		10800	<2	2	170	<5	<5	<0.3	5	1	2	2600	4.5	<5
NT-1000-3	Lab Dup.													
NT-1000-5		9360	<2	<2	140	<5	<5	<0.3	5	1	<2	2400	4.8	<5
NT-1000-7		13200	<2	2	200	<5	<5	<0.3	7	1	2	3900	5.6	<5
NT-3000-1		15400	<2	<2	200	<5	<5	<0.3	7	1	2	4100	5.6	<5
NT-3000-1	Lab Dup.													
NT-3000-2		14400	<2	2	190	<5	<5	<0.3	10	2	2	7340	6.7	<5
NT-3000-2	Lab Dup.	12700	<2	<2	160	<5	<5	<0.3	8	1	2	5500	5.7	<5
NT-3000-3		15100	<2	2	200	<5	<5	<0.3	8	1	3	4720	6.2	<5
NT-3000-4		9630	<2	<2	150	<5	<5	<0.3	3	1	<2	1860	3.9	<5
NT-3000-5		9550	<2	<2	150	<5	<5	<0.3	4	1	<2	2300	4.2	<5
NT-3000-5	Lab Dup.	10800	<2	<2	160	<5	<5	<0.3	5	<1	<2	3000	4.6	<5
NT-3000-6		12800	<2	<2	200	<5	<5	<0.3	6	1	3	3610	5.5	<5
NT-3000-7		11100	<2	<2	150	<5	<5	<0.3	5	1	<2	3160	4.7	<5
NT-3000-8		14900	<2	2	210	<5	<5	<0.3	8	1	2	4500	6.2	<5
NT-5000-1		9890	<2	<2	150	<5	<5	<0.3	4	1	<2	2300	4	<5
NT-5000-2		17200	<2	<2	240	<5	<5	<0.3	8	1	2	5000	6.4	<5
NT-5000-3		12900	<2	2	170	<5	<5	<0.3	7	1	2	4210	5.2	<5
NT-5000-3	Field Dup.	9810	<2	<2	150	<5	<5	<0.3	5	1	<2	2540	4.1	<5
NT-5000-5		10100	<2	<2	140	<5	<5	<0.3	5	1	<2	3080	4.1	<5
NT-5000-5	Lab Dup.	8320	<2	<2	130	<5	<5	<0.3	4	<1	<2	2200	3.7	<5
NT-5000-6		11500	<2	<2	180	<5	<5	<0.3	5	1	<2	2920	5	<5
NT-5000-7		9720	<2	<2	140	<5	<5	<0.3	4	1	2	1800	4.3	<5
NT-5000-8		4340	<2	<2	79	<5	<5	<0.3	2	<1	<2	830	2.1	<5
NT-7500-1		5000	<2	<2	68	<5	<5	<0.3	<2	<1	<2	650	1.9	<5
NT-7500-3		12400	<2	2	180	<5	<5	<0.3	6	1	2	3610	5.1	<5
NT-7500-5		6230	<2	<2	100	<5	<5	<0.3	2	<1	<2	1400	2.7	<5
NT-7500-6		9270	<2	<2	140	<5	<5	<0.3	5	1	<2	2390	4.4	<5
NT-7500-7		9080	<2	<2	130	<5	<5	<0.3	3	1	<2	2000	5.2	<5
NT-10000-1		17600	<2	2	250	<5	<5	<0.3	8	1	2	6070	6.8	<5
NT-10000-3		10500	<2	<2	170	<5	<5	<0.3	4	1	<2	2500	4.4	<5
NT-10000-7		9270	<2	<2	140	<5	<5	<0.3	5	1	<2	2300	4.4	<5
NT-10000-8		17600	<2	2	250	<5	<5	<0.3	10	2	2	6360	7.7	<5
NT-20000-3		7940	<2	<2	100	<5	<5	<0.3	4	1	<2	2500	3.6	<5
NT-20000-7		5890	<2	<2	91	<5	<5	<0.3	2	<1	<2	590	2.9	<5

TABLE 1a: Trace Elements at North Triumph Drill Site - November 1998(Continued)

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
NT-250-1		69	<2	<0.01	<2	<2	44	0.1	<2	0.3	6	11
NT-250-3		160	<2	<0.01	2	<2	58	0.2	<2	0.4	11	19
NT-250-5		130	<2	<0.01	2	<2	54	0.2	<2	0.4	11	14
NT-250-7		76	<2	<0.01	<2	<2	45	0.1	<2	0.3	7	11
NT-250-7	Field Dup.	90	<2	<0.01	<2	<2	44	0.1	<2	0.3	7	10
NT-500-1		120	<2	<0.01	2	<2	44	0.1	<2	0.3	9	14
NT-500-3		150	<2	<0.01	2	<2	58	0.2	<2	0.5	11	14
NT-500-3	Lab Dup.											
NT-500-5		91	<2	<0.01	2	<2	50	0.1	<2	0.3	8	12
NT-500-7		77	<2	<0.01	<2	<2	51	0.2	<2	0.3	8	18
NT-1000-1		120	<2	<0.01	2	<2	50	0.1	<2	0.3	9	10
NT-1000-1	Field Dup.	160	<2	<0.01	2	<2	49	0.1	<2	0.4	10	10
NT-1000-3		79	<2	<0.01	2	<2	43	0.1	<2	0.3	8	9
NT-1000-3	Lab Dup.											
NT-1000-5		78	<2	<0.01	<2	<2	41	0.1	<2	0.4	7	11
NT-1000-7		150	<2	<0.01	2	<2	52	0.2	<2	0.3	11	10
NT-3000-1		150	<2	<0.01	2	<2	55	0.2	<2	0.4	11	11
NT-3000-1	Lab Dup.											
NT-3000-2		320	<2	<0.01	3	<2	56	0.2	<2	0.6	17	20
NT-3000-2	Lab Dup.	230	<2	<0.01	2	<2	52	0.2	<2	0.5	13	15
NT-3000-3		150	<2	<0.01	3	<2	58	0.2	<2	0.4	12	10
NT-3000-4		53	<2	<0.01	<2	<2	41	0.1	<2	0.2	6	10
NT-3000-5		81	<2	<0.01	<2	<2	40	0.1	<2	0.2	7	8
NT-3000-5	Lab Dup.	120	<2	<0.01	<2	<2	45	0.1	<2	0.2	8	8
NT-3000-6		120	<2	<0.01	3	<2	53	0.1	<2	0.3	10	10
NT-3000-7		130	<2	<0.01	2	<2	45	0.1	<2	0.3	8	8
NT-3000-8		160	<2	<0.01	2	<2	59	0.2	<2	0.4	13	28
NT-5000-1		97	<2	<0.01	<2	<2	40	0.1	<2	0.2	6	10
NT-5000-2		180	<2	<0.01	3	<2	62	0.2	<2	0.5	14	12
NT-5000-3		170	<2	<0.01	2	<2	51	0.1	<2	0.3	11	11
NT-5000-3	Field Dup.	88	<2	<0.01	<2	<2	41	0.1	<2	0.3	7	8
NT-5000-5		140	<2	<0.01	<2	<2	41	0.1	<2	0.3	8	8
NT-5000-5	Lab Dup.	80	<2	<0.01	<2	<2	35	0.1	<2	0.2	7	9
NT-5000-6		94	<2	<0.01	2	<2	48	0.1	<2	0.2	8	9
NT-5000-7		47	<2	<0.01	<2	<2	43	0.1	<2	0.2	5	10
NT-5000-8		20	<2	<0.01	<2	<2	24	0.1	<2	0.1	3	6
NT-7500-1		16	<2	<0.01	<2	<2	21	0.1	<2	0.2	2	6
NT-7500-3		110	<2	<0.01	2	<2	49	0.1	<2	0.4	10	10
NT-7500-5		36	<2	<0.01	<2	<2	28	0.1	<2	0.2	4	6
NT-7500-6		78	<2	<0.01	2	<2	38	0.1	<2	0.2	7	8
NT-7500-7		69	<2	<0.01	<2	<2	40	0.1	<2	0.2	6	16
NT-10000-1		170	<2	<0.01	3	<2	61	0.2	<2	0.5	13	13
NT-10000-3		69	<2	<0.01	<2	<2	42	0.1	<2	0.2	7	8
NT-10000-7		84	<2	<0.01	<2	<2	40	0.1	<2	0.3	7	11
NT-10000-8		260	<2	<0.01	3	<2	71	0.2	<2	0.6	15	20
NT-20000-3		65	<2	<0.01	<2	<2	33	0.1	<2	0.2	6	10
NT-20000-7		76	<2	<0.01	<2	<2	26	0.1	<2	0.2	3	10

TABLE 2a: Petroleum Hydrocarbons at North Triumph Drill Site - November 1998

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₉ -C ₁₀ mg/kg	C ₁₁ -C ₁₂ mg/kg	C ₁₃ -C ₁₄ mg/kg	TEH (C ₁₁ -C ₁₄) mg/kg	TPH mg/kg
NT-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.3	2.76	103	4.06
NT-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.329	1.44	87	1.77
NT-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.371	1.75	100	2.12
NT-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.746	1.04	91	1.79
NT-250-7	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 1.5	< 2	84	0
NT-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.868	2.38	114	3.24
NT-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 2.5	< 3.5	108	0
NT-500-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.372	1.28	95	1.66
NT-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.23	2.44	96	3.67
NT-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.53	4.06	124	5.59
NT-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	3.21	78	3.21
NT-1000-1	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.556	2.08	121	2.63
NT-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	1.08	108	1.08
NT-1000-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	1.11	84	1.11
NT-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.35	3.46	127	4.81
NT-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 1.5	< 3.5	99	0
NT-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.81	2.16	103	2.97
NT-3000-1	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.8	< 2	112	0
NT-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 2.5	< 3.5	88	0
NT-3000-2	Lab Dup.									
NT-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.777	2.62	103	3.39
NT-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.339	1.15	92	1.49
NT-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.434	1.89	120	2.32
NT-3000-5	Lab Dup.									
NT-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.4	< 0.25	111	0
NT-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	1.03	109	1.03
NT-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.61	2.95	121	3.56
NT-5000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.8	< 1.5	118	0
NT-5000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.782	2.2	70	2.98
NT-5000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	0.858	102	0.86
NT-5000-3	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	0.615	96	0.62
NT-5000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	1.1	94	1.1
NT-5000-5	Lab Dup.									
NT-5000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 1	< 1.5	102	0
NT-5000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	1.26	96	1.26
NT-5000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.347	0.748	86	1.1
NT-7500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.344	< 0.25	77	0.34
NT-7500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.817	2.61	86	3.43
NT-7500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	83	0
NT-7500-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 1.5	< 1.75	120	0
NT-7500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.449	1.74	95	2.19
NT-10000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.718	1.76	85	2.48
NT-10000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.337	< 0.25	80	0.34
NT-10000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.376	1.31	107	1.68
NT-10000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 2.5	< 4.5	103	0
NT-20000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.363	1.2	98	1.57
NT-20000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.18	2.05	94	3.24

TABLE 3a: Polycyclic Aromatic Hydrocarbons at North Triumph Drill Site - November 1998 (Continued)

Unique station id	Replicate id	Pyrene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzolghi)perylene mg/kg
NT-250-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-7	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-3	Lab Dup.				
NT-500-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-1	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-3	Lab Dup.				
NT-1000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-1	Lab Dup.				
NT-3000-2		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-2	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-4		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-2		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-3	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-20000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-20000-7		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4a: Sediment Quality at North Triumph Drill Site - November 1998

Unique_station_M	Replicate_M	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
NT-250-1		0.3	0.3	0.1	98.4	0.5	0.9	0.0006	<0.3
NT-250-3		0.4	0.7	< 0.1	97.9	0.9	1.2	0.0004	0.40
NT-250-5		0.3	0.5	< 0.1	97.5	1.1	1.4	0.0004	<0.3
NT-250-7		0.7	0.3	< 0.1	98.7	0.4	1	0.0003	0.40
NT-250-7	Field Dup.	0.2	0.4	< 0.1	98.3	0.4	1.2	0.0004	0.30
NT-500-1		0.1	0.5	< 0.1	98.6	0.4	0.9	0.0005	<0.3
NT-500-3		0.1	0.6	0.1	97.8	1.1	1	0.0003	0.58
NT-500-3	Lab Dup.								
NT-500-5		0.2	0.4	0.3	97.6	1.2	0.9	0.0005	0.45
NT-500-7		0.2	0.5	< 0.1	98.5	0.5	1	0.0006	0.60
NT-1000-1		0.2	0.6	< 0.1	97.8	0.7	1.5	0.0006	0.75
NT-1000-1	Field Dup.	0.3	0.5	0.7	97.4	0.7	1.2	0.0010	0.95
NT-1000-3		0.2	0.6	< 0.1	97.8	1.1	1.2	0.0008	1.23
NT-1000-3	Lab Dup.								
NT-1000-5		0.7	0.4	< 0.1	98.4	0.5	1.1	0.0006	0.33
NT-1000-7		0.2	0.8	0.4	97.3	0.9	1.5	0.0010	0.45
NT-3000-1		0.3	0.8	< 0.1	97.9	0.9	1.2	0.0004	0.98
NT-3000-1	Lab Dup.								
NT-3000-2		0.2	0.5	< 0.1	97.9	1.2	1	0.0011	0.98
NT-3000-2	Lab Dup.			< 0.1	98.5	0.6	0.9		
NT-3000-3		0.3	1.1	< 0.1	95	3.4	1.6	0.0005	0.48
NT-3000-4		0.2	0.4	0.2	98	0.7	1	0.0003	<0.3
NT-3000-5		0.2	0.4	0.2	98.2	0.5	1.1	0.0003	0.83
NT-3000-5	Lab Dup.			0.3	97.9	0.7	1		
NT-3000-6		0.2	0.5	0.4	97.4	0.9	1.2	0.0001	1.28
NT-3000-7		0.1	0.4	< 0.1	98.5	0.7	0.8	0.0004	0.48
NT-3000-8		0.1	0.7	< 0.1	97.7	0.8	1.4	0.0003	0.53
NT-3000-1		< 0.1	0.6	< 0.1	98.3	0.6	1.1	0.0017	0.50
NT-3000-2		0.4	0.8	< 0.1	96.8	1.7	1.4	0.0003	0.38
NT-3000-3		0.5	0.5	< 0.1	98.1	0.7	1.2	0.0002	0.45
NT-3000-3	Field Dup.	< 0.1	0.7	< 0.1	97.6	1.3	1.1	0.0001	0.40
NT-3000-5		0.1	0.4	< 0.1	97.8	1.1	1.1	0.0026	0.95
NT-3000-5	Lab Dup.			< 0.1	98	0.9	1.1		
NT-3000-6		0.3	0.7	< 0.1	97.9	0.9	1.3	0.0009	0.70
NT-3000-7		0.9	0.4	< 0.1	98.5	0.6	0.9	0.0004	0.55
NT-3000-8		0.4	0.2	0.5	98.7	0.1	0.7	0.0002	0.58
NT-7500-1		0.1	0.3	2.9	96	0.2	0.8	0.0001	0.50
NT-7500-3		0.2	0.8	< 0.1	97.4	1.2	1.3	0.0008	0.98
NT-7500-5		0.1	0.4	< 0.1	98.3	0.5	1.1	0.0007	1.38
NT-7500-6		0.2	0.4	0.1	98.5	0.5	0.9	0.0005	0.38
NT-7500-7		< 0.1	0.5	< 0.1	98.8	0.3	0.9	0.0003	<0.3
NT-10000-1		0.3	1	5.6	91.8	1.2	1.4		
NT-10000-3		0.1	0.4	< 0.1	99	0.2	0.8	0.0013	3.50
NT-10000-7		0.9	0.5	< 0.1	98.6	0.4	1	0.0004	<0.3
NT-10000-8		1.4	0.8	< 0.1	98	0.8	1.2	0.0004	0.35
NT-20000-3		0.2	0.2	< 0.1	95.5	3.7	0.8	0.0001	0.48
NT-20000-7		0.2	0.3	1.6	97.6	0.1	0.8	0.0005	1.50

TABLE 5a: Toxicity at North Triumph Drill Site - November 1998

Unique station id	Replicate id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echinoid Fertilization		Microtox EC50
				Mortality %	Control Mortality %	% Fertilization	IC 50	
NT-250-1		<0.05	<0.05	8	2	0.00	10.8	>100%
NT-250-3		0.28	<0.05	0	2	0.00	6.1	>100%
NT-250-5		0.14	<0.05	10	2	0.33	14.3	>100%
NT-250-7		<0.05	<0.05	4	2	0.00	5.1	>100%
NT-250-7	Field Dup.	<0.05	<0.05	13	2	0.00	5.1	>100%
NT-500-1		<0.05	<0.05	10	2	0.00	5.3	>100%
NT-500-3		0.25	<0.05	2	2	0.00	8.6	>100%
NT-500-3	Lab Dup.							
NT-500-5		<0.05	<0.05	9	2	0.00	37.9	>100%
NT-500-7		1.41	<0.05	12	2	0.00	14.8	>100%
NT-1000-1								
NT-1000-1	Field Dup.							
NT-1000-3								
NT-1000-3	Lab Dup.							
NT-1000-5								
NT-1000-7								
NT-3000-1		0.28	<0.05	7	2	0.00	30.1	>100%
NT-3000-1	Lab Dup.							
NT-3000-2								
NT-3000-2	Lab Dup.							
NT-3000-3		<0.05	<0.05	12	2	0.00	17.5	>100%
NT-3000-4								
NT-3000-5		<0.05	<0.05	20	2	70.00		>100%
NT-3000-5	Lab Dup.							
NT-3000-6								
NT-3000-7		<0.05	No result	15	2	0.33	6.0	>100%
NT-3000-8								
NT-5000-1								
NT-5000-2								
NT-5000-3								
NT-5000-3	Field Dup.							
NT-5000-5								
NT-5000-5	Lab Dup.							
NT-5000-6								
NT-5000-7								
NT-5000-8								
NT-7500-1								
NT-7500-3								
NT-7500-5								
NT-7500-6								
NT-7500-7								
NT-10000-1								
NT-10000-3								
NT-10000-7								
NT-10000-8								
NT-20000-3		<0.05	<0.05	32	2	54.00	80.4	>100%
NT-20000-7		<0.05	<0.05	25	2	1.00	<10	>100%

**Laboratory Analytical Results
for Sediment from North Triumph Field, June 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at North Triumph Drill Site - June 1999

Unique station id	Replicate id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
NT-250-1		6600	<2	<2	110	<5	<5	<0.3	3	<1	<2	1300	3.1	<5
NT-250-1	Lab Dup.	7600	<2	<2	150	<5	<5	<0.3	3	<1	<2	1500	3.4	<5
NT-250-3		13000	<2	<2	210	<5	<5	<0.3	6	1	<2	3000	5.8	<5
NT-250-5		13000	<2	2	210	<5	<5	<0.3	7	1	2	3700	6	<5
NT-250-5	Field Dup.	15000	<2	2	240	<5	<5	<0.3	9	1	2	5700	6.8	<5
NT-250-7		9100	<2	<2	150	<5	<5	<0.3	4	<1	<2	1900	4.2	<5
NT-500-1		7200	<2	<2	140	<5	<5	<0.3	3	<1	2	1300	3.3	<5
NT-500-3		12000	<2	2	200	<5	<5	<0.3	6	1	2	3300	5.4	<5
NT-500-5		11000	<2	<2	180	<5	<5	<0.3	6	1	<2	3000	5.4	<5
NT-500-7		10000	<2	<2	170	<5	<5	<0.3	4	1	<2	2500	4.6	<5
NT-1000-1		13000	<2	2	230	<5	<5	<0.3	7	1	2	4000	6.2	<5
NT-1000-3		11000	<2	<2	200	<5	<5	<0.3	6	1	<2	3200	5.7	<5
NT-1000-5		9400	<2	<2	160	<5	<5	<0.3	4	1	<2	2400	4.9	<5
NT-1000-7		11000	<2	2	180	<5	<5	<0.3	5	1	<2	3000	5.4	<5
NT-3000-1		15000	<2	2	240	<5	<5	<0.3	9	2	2	6100	7.3	<5
NT-3000-2		12000	<2	2	200	<5	<5	<0.3	7	1	2	5000	6	<5
NT-3000-2	Field Dup.	12000	<2	2	180	<5	<5	<0.3	8	1	2	5400	5.5	<5
NT-3000-3		12000	<2	2	200	<5	<5	<0.3	5	1	<2	3100	6	<5
NT-3000-4		8100	<2	<2	130	<5	<5	<0.3	4	1	<2	2300	3.8	<5
NT-3000-4	Lab Dup.	9600	<2	<2	150	<5	<5	<0.3	6	1	<2	3300	4.6	<5
NT-3000-5		9900	<2	<2	170	<5	<5	<0.3	6	1	<2	2800	5	<5
NT-3000-6		11000	<2	<2	180	<5	<5	<0.3	6	1	2	3000	5.4	<5
NT-3000-7		9100	<2	<2	160	<5	<5	<0.3	6	1	<2	2800	4.7	<5
NT-3000-8		14000	<2	2	210	<5	<5	<0.3	10	1	2	5700	6.4	<5
NT-5000-1		10000	<2	<2	170	<5	<5	<0.3	5	1	<2	2700	4.2	<5
NT-5000-2		14000	<2	2	240	<5	<5	<0.3	9	1	2	5500	6.7	<5
NT-5000-3		13000	<2	2	200	<5	<5	<0.3	9	1	2	5300	6.1	<5
NT-5000-5		7300	<2	<2	130	<5	<5	<0.3	4	<1	<2	1700	3.4	<5
NT-5000-5	Field Dup.	8600	<2	<2	140	<5	<5	<0.3	5	1	<2	2400	4.2	<5
NT-5000-6		8800	<2	<2	150	<5	<5	<0.3	5	1	<2	2500	4.4	<5
NT-5000-7		12000	<2	<2	200	<5	<5	<0.3	7	1	2	3800	5.7	<5
NT-5000-8		4600	<2	<2	82	<5	<5	<0.3	2	<1	<2	970	2.4	<5
NT-7500-1		5200	<2	<2	84	<5	<5	<0.3	2	<1	<2	1200	2.6	<5
NT-7500-3		14000	<2	2	230	<5	<5	<0.3	10	1	2	5600	6.4	<5
NT-7500-5		5600	<2	<2	94	<5	<5	<0.3	3	<1	<2	1500	2.9	<5
NT-7500-5	Lab Dup.	6600	<2	<2	120	<5	<5	<0.3	4	<1	<2	1500	3.4	<5
NT-7500-6		8000	<2	<2	140	<5	<5	<0.3	4	1	<2	1900	4.1	<5
NT-7500-7		10000	<2	<2	160	<5	<5	<0.3	6	1	<2	3000	5.1	<5
NT-10000-1		16000	<2	2	240	<5	<5	<0.3	11	2	2	6200	6.7	<5
NT-10000-3		4600	<2	<2	84	<5	<5	<0.3	2	<1	<2	950	2.2	<5
NT-10000-7		10000	<2	<2	170	<5	<5	<0.3	6	1	<2	2900	4.7	<5
NT-10000-8		17000	<2	2	250	<5	<5	<0.3	13	2	2	7400	7.3	<5
NT-10000-8	Field Dup.	16000	<2	2	240	<5	<5	<0.3	9	2	2	5700	6.4	<5
NT-20000-3		10000	<2	2	170	<5	<5	<0.3	6	1	<2	2800	4.5	<5
NT-20000-7		4700	<2	<2	83	<5	<5	<0.3	2	<1	<2	850	2.4	<5

TABLE 1b: Trace Elements at North Triumph Drill Site - June 1999 (Continued)

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
NT-250-1		37	<2	<0.01	<2	<2	<0.5	28	0.1	<2	0.2	4	5
NT-250-1	Lab Dup.	45	<2	<0.01	<2	<2	<0.5	34	0.1	<2	0.2	5	5
NT-250-3		82	<2	<0.01	2	<2	<0.5	55	0.2	<2	0.3	8	8
NT-250-5		130	<2	<0.01	2	<2	<0.5	55	0.2	<2	0.4	10	9
NT-250-5	Field Dup.	190	<2	<0.01	2	<2	<0.5	63	0.2	<2	0.5	13	12
NT-250-7		55	<2	<0.01	<2	<2	<0.5	40	0.1	<2	0.2	5	6
NT-500-1		30	<2	<0.01	<2	<2	<0.5	33	0.1	<2	0.2	4	5
NT-500-3		100	<2	<0.01	2	<2	<0.5	50	0.2	<2	0.3	9	8
NT-500-5		96	<2	<0.01	2	<2	<0.5	47	0.2	<2	0.3	8	7
NT-500-7		72	<2	<0.01	<2	<2	<0.5	43	0.2	<2	0.3	7	7
NT-1000-1		140	<2	<0.01	2	<2	<0.5	55	0.2	<2	0.4	10	9
NT-1000-3		98	<2	<0.01	2	<2	<0.5	50	0.2	<2	0.3	9	8
NT-1000-5		78	<2	<0.01	<2	<2	<0.5	41	0.1	<2	0.3	6	7
NT-1000-7		87	<2	<0.01	2	<2	<0.5	46	0.2	<2	0.3	8	8
NT-3000-1		220	<2	<0.01	2	<2	<0.5	62	0.2	<2	0.5	14	19
NT-3000-2		170	<2	<0.01	2	<2	<0.5	52	0.2	<2	0.5	12	10
NT-3000-2	Field Dup.	210	<2	<0.01	2	<2	<0.5	52	0.2	<2	0.4	12	12
NT-3000-3		84	<2	<0.01	2	<2	<0.5	49	0.2	<2	0.3	8	8
NT-3000-4		85	<2	<0.01	<2	<2	<0.5	37	0.1	<2	0.2	6	7
NT-3000-4	Lab Dup.	130	<2	<0.01	<2	<2	<0.5	44	0.1	<2	0.3	9	8
NT-3000-5		94	<2	<0.01	2	<2	<0.5	45	0.1	<2	0.3	8	8
NT-3000-6		89	<2	<0.01	2	<2	<0.5	49	0.1	<2	0.3	9	9
NT-3000-7		110	<2	<0.01	<2	<2	<0.5	45	0.1	<2	0.3	8	8
NT-3000-8		210	<2	<0.01	2	<2	<0.5	60	0.2	<2	0.4	14	12
NT-5000-1		100	<2	<0.01	2	<2	<0.5	46	0.1	<2	0.3	7	8
NT-5000-2		190	<2	<0.01	2	<2	<0.5	62	0.2	<2	0.6	14	12
NT-5000-3		190	<2	<0.01	2	<2	<0.5	55	0.2	<2	0.4	12	11
NT-5000-5		59	<2	<0.01	<2	<2	<0.5	35	0.1	<2	0.2	5	6
NT-5000-5	Field Dup.	73	<2	<0.01	<2	<2	<0.5	39	0.1	<2	0.3	7	8
NT-5000-6		88	<2	<0.01	<2	<2	<0.5	41	0.1	<2	0.2	7	7
NT-5000-7		160	<2	<0.01	2	<2	<0.5	54	0.2	<2	0.4	10	9
NT-5000-8		30	<2	<0.01	<2	<2	<0.5	25	0.1	<2	0.2	4	5
NT-7500-1		20	<2	<0.01	<2	<2	<0.5	25	0.1	<2	0.4	4	5
NT-7500-3		170	<2	<0.01	2	<2	<0.5	61	0.2	<2	0.4	14	11
NT-7500-5		38	<2	<0.01	<2	<2	<0.5	27	0.1	<2	0.2	5	5
NT-7500-5	Lab Dup.	45	<2	<0.01	<2	<2	<0.5	33	0.1	<2	0.2	4	6
NT-7500-6		53	<2	<0.01	<2	<2	<0.5	37	0.1	<2	0.2	5	6
NT-7500-7		110	<2	<0.01	<2	<2	<0.5	45	0.1	<2	0.3	9	8
NT-10000-1		200	<2	<0.01	4	<2	<0.5	62	0.2	<2	0.6	14	12
NT-10000-3		15	<2	<0.01	<2	<2	<0.5	22	0.1	<2	0.1	3	4
NT-10000-7		110	<2	<0.01	2	<2	<0.5	46	0.1	<2	0.3	8	8
NT-10000-8		290	<2	<0.01	3	<2	<0.5	68	0.2	<2	0.6	17	15
NT-10000-8	Field Dup.	230	<2	<0.01	3	<2	<0.5	65	0.2	<2	0.6	14	13
NT-20000-3		64	<2	<0.01	2	<2	<0.5	43	0.2	<2	0.3	7	8
NT-20000-7		22	<2	<0.01	<2	<2	<0.5	21	0.1	<2	0.2	3	5

TABLE 2b: Petroleum Hydrocarbons at North Triumph Drill Site - June 1999

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₅ mg/kg	C ₁₆ -C ₂₀ mg/kg	TEH (C ₁₁ -C ₂₀) mg/kg	TPH mg/kg
NT-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.905	1.45	2.36	2.36
NT-250-1	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.14	1.86	3.01	3.01
NT-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.41	2.42	3.83	3.84
NT-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.87	3.11	4.98	4.99
NT-250-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.72	4.53	7.25	7.25
NT-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.64	2.88	4.52	4.53
NT-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.07	1.67	2.74	2.75
NT-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.49	3.79	6.28	6.28
NT-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.45	4.5	6.95	6.95
NT-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.49	2.85	4.34	4.34
NT-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.68	3.39	5.07	5.06
NT-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.65	3.42	5.07	5.08
NT-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.45	2.96	4.41	4.41
NT-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.38	4.58	6.96	6.96
NT-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.97	5.36	8.33	8.33
NT-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	2.65	2.65	2.65
NT-3000-2	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.36	2.58	3.94	3.94
NT-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2	3.99	5.99	5.99
NT-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.906	1.54	2.45	2.44
NT-3000-4	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.3	2.16	3.46	3.46
NT-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.46	2.7	4.16	4.16
NT-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.16	2.42	3.58	3.59
NT-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.12	2.14	3.26	3.26
NT-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.61	3.39	5.00	5
NT-5000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.74	5.08	7.82	7.82
NT-5000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.96	4.43	6.39	6.39
NT-5000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.25	2.98	4.23	4.22
NT-5000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.25	2.7	3.95	3.94
NT-5000-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.696	1.27	1.96	1.96
NT-5000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.45	3.47	4.92	4.92
NT-5000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.04	2.44	3.48	3.48
NT-5000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.12	2.08	3.20	3.19
NT-7500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.12	2.45	3.57	3.57
NT-7500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.73	2.89	4.62	4.62
NT-7500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.914	1.67	2.58	2.58
NT-7500-5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.35	2.72	4.07	4.06
NT-7500-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.07	2.02	3.09	3.1
NT-7500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.11	1.88	2.99	2.98
NT-10000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.79	3.36	5.15	5.15
NT-10000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.817	1.95	2.77	2.77
NT-10000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.739	2.12	2.86	2.86
NT-10000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.3	3.16	4.46	4.45
NT-10000-8	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.24	4.43	6.68	6.68
NT-20000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.913	2.38	3.29	3.29
NT-20000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.719	1.78	2.50	2.49

TABLE 3b: Polycyclic Aromatic Hydrocarbons at North Triumph Drill Site - June 1999 (Continued)

Unique_station_id	Replicate_id	Pyrene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
NT-250-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-1	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-5	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-2		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-2	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-4		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-4	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-2		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-5	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-8	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-20000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-20000-7		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4b: Sediment Quality at North Triumph Drill Site - June 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
NT-250-1		0.2	0.1	< 0.1	98.8	0.3	0.8	0.0004	<0.20
NT-250-1	Lab Dup.			< 0.1	98.8	0.3	0.9		
NT-250-3		0.3	0.2	< 0.1	97.7	1.1	1.2	0.0006	0.20
NT-250-3		0.3	0.2	< 0.1	97.9	0.8	1.3	0.0004	0.28
NT-250-3	Field Dup.	0.3	0.2	< 0.1	97.9	1	1.1	0.0001	<0.20
NT-250-7		0.3	0.1	< 0.1	98.7	0.4	0.9	0.0005	<0.20
NT-300-1		0.3	< 0.1	0.8	98.1	0.3	0.7	0.0004	0.22
NT-300-3		0.6	0.1	< 0.1	97.9	0.9	1.2	0.0004	<0.20
NT-300-3		0.3	0.2	0.1	97.6	0.9	1.4	0.0007	0.25
NT-300-7		0.3	0.3	0.1	98.1	0.7	1.1	0.0018	<0.20
NT-1000-1		0.3	0.3	< 0.1	98	0.8	1.2	0.0001	<0.20
NT-1000-3		0.3	0.2	< 0.1	97.9	0.9	1.2	0.0004	0.30
NT-1000-3		0.4	0.1	< 0.1	98.4	0.7	1	0.0003	<0.20
NT-1000-7		0.6	0.2	< 0.1	97.9	0.8	1.3	0.0005	0.22
NT-3000-1		0.7	0.2	< 0.1	97.8	0.7	1.4	0.0002	0.28
NT-3000-2		0.3	< 0.1	< 0.1	97.7	1.2	1.1	0.0018	<0.20
NT-3000-2	Field Dup.	0.4	0.1	< 0.1	98.3	0.6	1.1	0.0002	0.22
NT-3000-3		0.3	0.1	0.1	96.8	1.8	1.3	0.0006	<0.20
NT-3000-4		0.4	0.1	0.6	97.7	0.7	1	0.0005	0.45
NT-3000-4	Lab Dup.			0.8	97	1.2	1		
NT-3000-5		0.4	0.1	< 0.1	98.1	0.8	1.1	0.0011	0.33
NT-3000-6		0.3	0.1	< 0.1	98	0.7	1.3	0.0020	0.33
NT-3000-7		0.3	0.1	0.1	98.6	0.4	1	0.0006	<0.20
NT-3000-8		0.3	0.1	< 0.1	95	3.7	1.2	0.0004	0.38
NT-3000-1		0.6	0.2	< 0.1	98.2	0.3	1.3	0.0004	<0.20
NT-3000-2		0.6	0.3	< 0.1	97.3	1.1	1.6	0.0003	0.23
NT-3000-3		0.4	0.2	0.1	97.6	1.1	1.2	0.0004	<0.20
NT-3000-3		0.2	0.2	0.2	98.2	0.4	1.2	0.0006	<0.20
NT-3000-3	Field Dup.	0.4	< 0.1	0.1	98.4	0.3	1.1	0.0004	<0.20
NT-3000-6		0.4	< 0.1	< 0.1	98.6	0.3	1.1	0.0019	<0.20
NT-3000-7		0.3	0.2	< 0.1	98.3	0.6	1.1	0.0007	0.38
NT-3000-8		0.1	0.2	< 0.1	99	0.1	0.9	0.0006	0.30
NT-7500-1		0.2	0.1	2	96.8	0.3	0.9	0.0009	0.30
NT-7500-3		0.3	0.2	< 0.1	97	1.6	1.4	0.0005	<0.20
NT-7500-3		0.3	0.1	< 0.1	98.3	0.6	1.1	0.0004	<0.20
NT-7500-3	Lab Dup.			1.5	96.9	0.6	1		
NT-7500-6		0.3	0.1	< 0.1	98.2	0.3	1.3	0.0005	<0.20
NT-7500-7		0.2	0.2	< 0.1	98.3	0.6	0.9	0.0003	0.22
NT-10000-1		0.3	0.3	< 0.1	98.3	0.3	1.2	0.0004	0.48
NT-10000-3		0.2	< 0.1	1.1	98	0.1	0.8	0.0004	<0.20
NT-10000-7		0.3	0.1	< 0.1	98.8	0.2	1	0.0004	0.52
NT-10000-8		0.6	0.3	< 0.1	98.1	0.3	1.4	0.0004	0.23
NT-10000-8	Field Dup.	0.8	0.1	0.2	98	0.3	1.3	0.0006	<0.20
NT-20000-3		0.4	0.1	< 0.1	97.6	1.3	1.1	0.0005	<0.20
NT-20000-7		0.2	0.2	0.1	99.1	0.1	0.7	0.0006	0.82

TABLE 5b: Toxicity at North Triumph Drill Site - June 1999

Unique_station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Ecklohd % Fertilization	Fertilization IC50	Microtox EC50
				Mortality	Control Mortality %			
NT-250-1		3.65	<20	3	3	92.5	>100%	>100%
NT-250-1	Lab Dup.							
NT-250-3		6.87	<20	12	3	85.3	>100%	>100%
NT-250-3		6.31	<20	7	3	95.3	>100%	>100%
NT-250-5	Field Dup.	4.45	<20	9	3	24.5	51.80%	>100%
NT-250-7		7.76	<20	4	3	21.0	72.60%	>100%
NT-500-1		5.21	<20	3	3	86.8	>100%	>100%
NT-500-3		3.35	<20	3	3	53.3	>100%	>100%
NT-500-5		5.54	<20	4	3	83.8	>100%	>100%
NT-500-7		5.64	<20	20	3	70.3	>100%	>100%
NT-1000-1								
NT-1000-3								
NT-1000-5								
NT-1000-7								
NT-3000-1		6.92	<20	1		83.8	>100%	>100%
NT-3000-2								
NT-3000-2	Field Dup.							
NT-3000-3		3.16	<20	15		35.5	78.20%	>100%
NT-3000-4								
NT-3000-4	Lab Dup.							
NT-3000-5		8.00	<20	5		58.8	>100%	>100%
NT-3000-6								
NT-3000-7		3.46	<20	7		81.7	>100%	>100%
NT-3000-8								
NT-5000-1								
NT-5000-2								
NT-5000-3								
NT-5000-5								
NT-5000-5	Field Dup.							
NT-5000-6								
NT-5000-7								
NT-5000-8								
NT-7500-1								
NT-7500-3								
NT-7500-5								
NT-7500-5	Lab Dup.							
NT-7500-6								
NT-7500-7								
NT-10000-1								
NT-10000-3								
NT-10000-7								
NT-10000-8								
NT-10000-8	Field Dup.							
NT-20000-3		4.94	<20	6	3	74.5	>100%	>100%
NT-20000-7		4.48	<20	7	3	81.0	>100%	>100%

**Laboratory Analytical Results
for Sediment from North Triumph Field, November 1999**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1c: Trace Elements at North Triumph Drill Site - November 1999

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Boron mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
NT-250-1		8600	<2	<2	1200	<5	<5	<0.3	5	1	2	2900	4.5	<5
NT-250-3		11000	<2	<2	220	<5	<5	<0.3	7	1	2	3900	5.6	<5
NT-250-5		9100	<2	<2	250	<5	<5	<0.3	5	1	<2	2900	4.6	<5
NT-250-7		7100	<2	<2	1900	<5	<5	<0.3	4	1	<2	2600	4.2	<5
NT-250-7	Field Dup.	4900	<2	<2	1100	<5	<5	<0.3	2	<1	<2	1200	2.9	<5
NT-500-1		5300	<2	<2	180	<5	<5	<0.3	2	<1	<2	940	2.8	<5
NT-500-3		10000	<2	<2	250	<5	<5	<0.3	5	1	2	3400	6.1	<5
NT-500-3	Lab Dup.													
NT-500-5		9600	<2	<2	230	<5	<5	<0.3	7	1	2	3700	5.4	<5
NT-500-7		11000	<2	2	580	<5	<5	<0.3	8	1	2	4200	6.3	<5
NT-1000-1		11000	<2	<2	260	<5	<5	<0.3	8	1	2	4300	5.9	<5
NT-1000-3		9400	<2	<2	200	<5	<5	<0.3	6	1	2	3600	5.4	<5
NT-1000-3	Lab Dup.	9000	<2	<2	170	<5	<5	<0.3	6	1	<2	3400	4.9	<5
NT-1000-5		8500	<2	<2	190	<5	<5	<0.3	5	1	<2	2900	4.4	<5
NT-1000-7		9700	<2	<2	260	<5	<5	<0.3	8	1	2	4000	5.4	<5
NT-3000-1		13000	<2	2	220	<5	<5	<0.3	10	2	2	5600	6.2	<5
NT-3000-2		9300	<2	<2	170	<5	<5	<0.3	7	1	2	4100	5.1	<5
NT-3000-3		10000	<2	<2	190	<5	<5	<0.3	7	1	2	3900	5.4	<5
NT-3000-4		7900	<2	<2	150	<5	<5	<0.3	4	1	<2	2500	4.2	<5
NT-3000-5		7100	<2	<2	130	<5	<5	<0.3	4	1	<2	2300	3.8	<5
NT-3000-5	Field Dup.	7200	<2	<2	130	<5	<5	<0.3	4	<1	<2	2100	3.9	<5
NT-3000-6		8400	<2	<2	160	<5	<5	<0.3	6	1	<2	3300	4.7	<5
NT-3000-7		7400	<2	<2	160	<5	<5	<0.3	5	1	<2	2600	4.2	<5
NT-3000-8		11000	<2	2	200	<5	<5	<0.3	10	1	2	4900	5.3	<5
NT-3000-8	Lab Dup.	11000	<2	<2	210	<5	<5	<0.3	8	1	2	4600	5.8	<5
NT-5000-1		9600	<2	<2	190	<5	<5	<0.3	6	1	<2	3500	4.5	<5
NT-5000-2		13000	<2	2	240	<5	<5	<0.3	12	2	2	6100	7	<5
NT-5000-2	Field Dup.	13000	<2	2	230	<5	<5	<0.3	10	1	2	5500	6.6	<5
NT-5000-3		8200	<2	<2	170	<5	<5	<0.3	6	1	<2	3200	4.5	<5
NT-5000-5		7100	<2	<2	150	<5	<5	<0.3	6	1	<2	2700	4.8	<5
NT-5000-6		9000	<2	<2	170	<5	<5	<0.3	6	1	2	3300	4.9	<5
NT-5000-7		8200	<2	<2	170	<5	<5	<0.3	5	1	<2	2800	4.4	<5
NT-5000-8		4400	<2	<2	91	<5	<5	<0.3	<2	<1	<2	860	2	<5
NT-7500-1		3400	<2	<2	49	<5	<5	<0.3	<2	<1	<2	750	1.4	<5
NT-7500-3		10000	<2	2	210	<5	<5	<0.3	8	1	2	3900	6.1	<5
NT-7500-5		4200	<2	<2	78	<5	<5	<0.3	2	<1	<2	1100	2.4	<5
NT-7500-5	Lab Dup.	4900	<2	<2	86	<5	<5	<0.3	2	<1	<2	1200	2.4	<5
NT-7500-6		6200	<2	<2	130	<5	<5	<0.3	3	<1	<2	1800	3.8	<5
NT-7500-7		7400	<2	<2	150	<5	<5	<0.3	5	1	<2	2400	4.4	<5
NT-10000-1		13000	<2	2	240	<5	<5	<0.3	9	1	2	5000	6.4	<5
NT-10000-3		3800	<2	<2	69	<5	<5	<0.3	2	<1	<2	780	2.1	<5
NT-10000-7		8100	<2	<2	160	<5	<5	<0.3	5	1	<2	2700	4.6	<5
NT-10000-8		14000	<2	2	250	<5	<5	<0.3	9	1	2	4600	6.5	<5
NT-20000-3		11000	<2	2	210	<5	<5	<0.3	11	1	4	5300	6	<5
NT-20000-3	Field Dup.	12000	<2	2	220	<5	<5	<0.3	8	1	2	4700	6	<5
NT-20000-7		1700	<2	<2	77	<5	<5	<0.3	2	<1	<2	630	1.9	<5

TABLE 1c: Trace Elements at North Triumph Drill Site - November 1999 (Continued)

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Strontium mg/kg	Thallium mg/kg	Ti mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
NT-250-1		99	<2	<0.01	2	<2	<0.5	71	0.1	<2	0.2	7	8
NT-250-3		150	<2	<0.01	2	<2	<0.5	56	0.2	<2	0.4	10	9
NT-250-5		89	<2	<0.01	2	<2	<0.5	52	0.1	<2	0.3	8	8
NT-250-7		100	<2	<0.01	<2	<2	<0.5	77	0.1	<2	0.2	6	8
NT-250-7	Field Dup.	23	<2	<0.01	<2	<2	<0.5	46	0.1	<2	0.2	3	4
NT-500-1		18	<2	<0.01	<2	<2	<0.5	29	0.1	<2	0.2	3	4
NT-500-3		100	<2	<0.01	2	<2	<0.5	54	0.2	<2	0.3	9	9
NT-500-3	Lab Dup.												
NT-500-5		130	<2	<0.01	2	<2	<0.5	51	0.2	<2	0.4	10	9
NT-500-7		120	<2	<0.01	2	<2	<0.5	66	0.2	<2	0.4	11	14
NT-1000-1		150	<2	<0.01	2	<2	<0.5	57	0.2	<2	0.4	12	10
NT-1000-3		130	<2	<0.01	2	<2	<0.5	51	0.2	<2	0.4	9	9
NT-1000-3	Lab Dup.	150	<2	<0.01	2	<2	<0.5	44	0.1	<2	0.3	9	8
NT-1000-5		98	<2	<0.01	2	<2	<0.5	49	0.1	<2	0.3	8	8
NT-1000-7		130	<2	<0.01	2	<2	<0.5	50	0.2	<2	0.4	11	10
NT-3000-1		230	<2	<0.01	3	<2	<0.5	60	0.2	2	0.6	16	13
NT-3000-2		170	<2	<0.01	2	<2	<0.5	49	0.2	<2	0.4	11	9
NT-3000-3		130	<2	<0.01	2	<2	<0.5	51	0.2	<2	0.4	10	9
NT-3000-4		84	<2	<0.01	<2	<2	<0.5	42	0.1	<2	0.3	7	7
NT-3000-5		72	<2	<0.01	<2	<2	<0.5	38	0.1	<2	0.2	6	6
NT-3000-5	Field Dup.	55	<2	<0.01	<2	<2	<0.5	38	0.1	<2	0.2	6	5
NT-3000-6		110	<2	<0.01	2	<2	<0.5	43	0.1	<2	0.3	9	8
NT-3000-7		92	<2	<0.01	<2	<2	<0.5	38	0.1	<2	0.3	7	8
NT-3000-8		210	<2	<0.01	2	<2	<0.5	57	0.2	<2	0.4	14	11
NT-3000-8	Lab Dup.	190	<2	<0.01	2	<2	<0.5	55	0.2	<2	0.4	13	11
NT-5000-1		150	<2	<0.01	2	<2	<0.5	48	0.2	<2	0.3	9	9
NT-5000-2		270	<2	<0.01	3	<2	<0.5	62	0.2	<2	0.6	17	15
NT-5000-2	Field Dup.	260	<2	<0.01	2	<2	<0.5	63	0.2	<2	0.6	14	11
NT-5000-3		120	<2	<0.01	2	<2	<0.5	40	0.1	<2	0.3	9	9
NT-5000-5		88	<2	<0.01	<2	<2	<0.5	39	0.1	<2	0.3	8	8
NT-5000-6		99	<2	<0.01	2	<2	<0.5	48	0.1	<2	0.3	9	7
NT-5000-7		95	<2	<0.01	<2	<2	<0.5	47	0.1	<2	0.3	7	7
NT-5000-8		16	<2	<0.01	<2	<2	<0.5	22	<0.1	<2	0.2	3	4
NT-7500-1		11	<2	<0.01	<2	<2	<0.5	17	<0.1	<2	0.2	2	4
NT-7500-3		110	<2	<0.01	2	<2	<0.5	58	0.2	<2	0.3	11	9
NT-7500-5		22	<2	<0.01	<2	<2	<0.5	21	<0.1	<2	0.2	3	5
NT-7500-5	Lab Dup.	26	<2	<0.01	<2	<2	<0.5	26	0.1	<2	0.2	3	5
NT-7500-6		53	<2	<0.01	<2	<2	<0.5	36	0.1	<2	0.2	5	6
NT-7500-7		75	<2	<0.01	<2	<2	<0.5	42	0.1	<2	0.3	7	8
NT-10000-1		160	<2	<0.01	2	<2	<0.5	61	0.2	<2	0.5	13	11
NT-10000-3		11	<2	<0.01	<2	<2	<0.5	22	0.1	<2	0.1	3	4
NT-10000-7		99	<2	<0.01	<2	<2	<0.5	44	0.1	<2	0.3	7	7
NT-10000-8		160	<2	<0.01	3	<2	<0.5	70	0.2	<2	0.5	12	12
NT-20000-3		94	<2	<0.01	3	<2	<0.5	55	0.2	<2	0.4	15	12
NT-20000-3	Field Dup.	130	<2	<0.01	2	<2	<0.5	55	0.2	<2	0.5	12	9
NT-20000-7		12	<2	<0.01	<2	<2	<0.5	15	<0.1	<2	0.1	2	4

TABLE 2c: Petroleum Hydrocarbons at North Triumph Drill Site - November 1999

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₀ -C ₁₆ mg/kg	C ₁₇ -C ₂₁ mg/kg	TEH (C ₁₀ -C ₂₁) mg/kg	TPH mg/kg
NT-250-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	547	13.9	561	561
NT-250-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.98	2.94	7.91	7.91
NT-250-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	46.5	6.9	53.4	53.4
NT-250-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2340	101	2440	2440
NT-250-7	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	5580	42.2	5620	5620
NT-500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	13.2	3.58	16.8	16.8
NT-500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	30.1	6.96	37.1	37.1
NT-500-3	Lab Dup.									
NT-500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	8.58	5.55	14.1	14.1
NT-500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	592	21	613	613
NT-1000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	6.49	6.45	12.9	12.9
NT-1000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.1	2.68	5.78	5.78
NT-1000-3	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.07	3.28	6.36	6.36
NT-1000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	7.3	6	13.3	13.3
NT-1000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	46.3	6.46	52.7	52.7
NT-3000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-3000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.49	3.14	5.64	5.64
NT-3000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.13	4.77	8.9	8.9
NT-3000-4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.44	2.72	5.16	5.16
NT-3000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-3000-5	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.824	2.38	3.2	3.2
NT-3000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-3000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.01	2.6	5.62	5.62
NT-3000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.65	3.11	6.76	6.76
NT-3000-8	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.14	3.34	6.48	6.48
NT-5000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-5000-2		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-5000-2	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-5000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-5000-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-5000-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-5000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.75	2.95	5.7	5.7
NT-5000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-7500-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-7500-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-7500-5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-7500-5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-7500-6		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-7500-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.84	1.98	3.82	3.82
NT-10000-1		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-10000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-10000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.62	2.56	4.18	4.18
NT-10000-8		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.02	1.61	< 3	< 3
NT-20000-3		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-20000-3	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3
NT-20000-7		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 3	< 3

TABLE 3c: Polycyclic Aromatic Hydrocarbons at North Triumph Drill Site - November 1999 (Continued)

Unique_station_id	Replicate_id	Pyrene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
NT-250-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-250-7	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-3	Lab Dup.				
NT-500-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-500-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-3	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-2		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-4		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-5	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-3000-8	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-2		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-2	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-5000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-5		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-6		< 0.05	< 0.05	< 0.05	< 0.05
NT-7500-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-1		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-7		< 0.05	< 0.05	< 0.05	< 0.05
NT-10000-8		< 0.05	< 0.05	< 0.05	< 0.05
NT-20000-3		< 0.05	< 0.05	< 0.05	< 0.05
NT-20000-3	Field Dup.	< 0.05	< 0.05	< 0.05	< 0.05
NT-20000-7		< 0.05	< 0.05	< 0.05	< 0.05

TABLE 4c: Sediment Quality at North Triumph Drill Site - November 1999

Unique_station_id	Replicate_id	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	SPM g/L	Ba Content
NT-250-1		1.2	0.7	0.1	96.4	1.7	1.8	0.0005	0.40
NT-250-3		1.1	0.2	< 0.1	97.3	1.5	1.2	0.0005	<0.20
NT-250-5		1.1	0.2	< 0.1	97.3	1.4	1.3	0.0004	<0.20
NT-250-7		0.9	0.6	< 0.1	97.5	1.1	1.4	0.0006	0.25
NT-250-7	Field Dup.	0.7	0.8	< 0.1	97.4	0.9	1.7	0.0006	1.55
NT-300-1		0.5	0.2	< 0.1	99	0.2	0.8	0.0007	0.47
NT-300-3		1.2	0.3	< 0.1	96.5	2	1.4	0.0007	0.30
NT-300-3	Lab Dup.								
NT-300-5		1.1	0.4	0.2	97.1	1.4	1.3	0.0005	0.25
NT-300-7		2.2	0.7	< 0.1	94.9	2.6	2.3	0.0005	<0.20
NT-1000-1		1.2	0.3	< 0.1	96.9	1.6	1.5	0.0012	<0.32
NT-1000-3		0.8	0.1	< 0.1	97.9	1	1.1	0.0008	0.47
NT-1000-3	Lab Dup.	0.7	0.2	< 0.1	98.4	0.5	1.1		
NT-1000-5		1.1	0.4	0.1	97.3	1.1	1.5	0.0009	0.24
NT-1000-7		1.1	0.3	< 0.1	97.4	1.1	1.6	0.0010	0.27
NT-3000-1		1.1	< 0.1	0.1	97.7	0.7	1.3	0.0005	0.23
NT-3000-2		0.7	0.2	< 0.1	98.5	0.4	1.2	0.0005	<0.20
NT-3000-3		1	0.2	< 0.1	97.5	1.1	1.4	0.0006	0.22
NT-3000-4		0.8	0.2	0.3	97.7	0.8	1.2	0.0006	<0.20
NT-3000-5		1	< 0.1	< 0.1	98.3	1	0.7	0.0004	0.23
NT-3000-5	Field Dup.	0.7	0.3	< 0.1	97.9	0.8	1.3	0.0018	<0.20
NT-3000-6		0.8	< 0.1	2.3	95.6	0.8	1.3	0.0006	<0.21
NT-3000-7		0.7	< 0.1	< 0.1	98.6	0.4	1	0.0005	<0.20
NT-3000-8		1	0.1	0.2	98	0.6	1.2	0.0008	0.48
NT-3000-8	Lab Dup.	1.1	< 0.1	0.2	98	0.7	1.1		
NT-5000-1		0.8	0.1	0.2	98.2	0.6	1	0.0004	0.23
NT-5000-2		1.3	< 0.1	0.2	97.6	0.9	1.3	0.0003	0.30
NT-5000-2	Field Dup.	0.9	0.4	< 0.1	98.1	0.6	1.4	0.0006	0.60
NT-5000-3		0.9	< 0.1	0.1	97.8	1	1.1	0.0007	0.90
NT-5000-5		0.8	0.1	< 0.1	98	0.9	1.2	0.0007	0.35
NT-5000-6		0.9	0.1	< 0.1	98.1	0.9	1.2	0.0010	0.33
NT-5000-7		1	< 0.1	0.2	98	0.6	1.2	0.0001	<0.20
NT-5000-8		0.3	0.1	0.4	98.8	0.1	0.7	0.0005	<0.20
NT-7500-1		0.3	< 0.1	0.1	99.2	0.2	0.5	0.0006	0.27
NT-7500-3		1.5	0.2	< 0.1	95.4	3.1	1.4	0.0008	0.44
NT-7500-5		0.7	0.1	< 0.1	98.5	0.7	0.8	0.0005	0.20
NT-7500-5	Lab Dup.	0.8	0.1	< 0.1	98.3	0.7	1		
NT-7500-6		0.8	0.2	0.7	97.2	0.9	1.2	0.0007	0.35
NT-7500-7		0.6	0.1	< 0.1	98.5	0.6	0.9	0.0005	<0.20
NT-10000-1		1.6	< 0.1	0.6	96.5	1.4	1.5	0.0006	0.30
NT-10000-3		0.5	< 0.1	3.9	95	0.4	0.7	0.0003	<0.20
NT-10000-7		0.7	0.1	< 0.1	98.3	0.5	1.1	0.0006	<0.20
NT-10000-8		1.5	0.3	1.5	87.6	9.1	1.8	0.0006	0.77
NT-20000-3		2.5	0.3	< 0.1	91.7	6	2.3	0.0005	<0.20
NT-20000-3	Field Dup.	0.9	0.3	< 0.1	96.6	2	1.5	0.0004	<0.20
NT-20000-7		0.2	0.1	0.6	98.6	0.1	0.7	0.0007	0.50

TABLE 5c: Toxicity at North Triumph Drill Site - November 1999

Unique_station_id	Replicate_id	Ammonia mg/kg	Sulphide mg/kg	Amphipod Survival		Echinoid % Fertilization	Fertilization IC50	Microtox EC50
				Mortality %	Control Mortality %			
NT-250-1		<0.50	<10	56	0	70.8	>100%	>100%
NT-250-3		6.32	<10	6	0	49.3	>100%	>100%
NT-250-5		9.41	<10	30	0	25.3	63.60%	>100%
NT-250-7		<0.50	<10	36	0	73.3	>100%	>100%
NT-250-7	Field Dup.	<0.50	<10	9	0	81.2	>100%	>100%
NT-500-1		<0.50	<10	13	0	82.8	>100%	>100%
NT-500-3		1.27	<10	11	0	13.5	43.70%	>100%
NT-500-3	Lab Dup.	3.74						
NT-500-5		6.57	<10	8	0	42.3	87.10%	>100%
NT-500-7		1.22	<10	12	0	35.0	77.30%	>100%
NT-1000-1								
NT-1000-3								
NT-1000-3	Lab Dup.							
NT-1000-5								
NT-1000-7								
NT-3000-1		1.38	<10	7	0	29.0	74.30%	>100%
NT-3000-2								
NT-3000-3		<0.50	<10	6	0	30.0	73.90%	>100%
NT-3000-4								
NT-3000-5		<0.50	<10	1	0	58.8	>100%	>100%
NT-3000-5	Field Dup.	<0.50	<10	11	0	84.5	>100%	>100%
NT-3000-6								
NT-3000-7		<0.50	<10	10	0	18.3	37.80%	>100%
NT-3000-8								
NT-3000-8	Lab Dup.							
NT-5000-1								
NT-5000-2								
NT-5000-2	Field Dup.							
NT-5000-3								
NT-5000-5								
NT-5000-6								
NT-5000-7								
NT-5000-8								
NT-7500-1								
NT-7500-3								
NT-7500-5								
NT-7500-5	Lab Dup.							
NT-7500-6								
NT-7500-7								
NT-10000-1								
NT-10000-3								
NT-10000-7								
NT-10000-8								
NT-20000-3		5.61	<10	2	0	63.5	>100%	>100%
NT-20000-3	Field Dup.	1.92	<10	21	0	73.2	>100%	>100%
NT-20000-7		<0.50	<10	8	0	80.3	>100%	>100%

**Laboratory Analytical Results
for Sediment from North Triumph Field, June 2000**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1a: Trace Elements at North Triumph Drill Site - Spring 2000

Unique_station_id	Replicate_id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
NT250-1D4		7400	<2	<2	120	<5	<0.3	3	1	<2	1300	3.3	<5
NT250-3D4		12000	<2	<2	270	<5	<0.3	7	1	2	3600	5.8	<5
NT250-5D4		12000	<2	<2	240	<5	<0.3	6	1	2	3200	3.5	<5
NT250-7D4		9000	<2	<2	1200	<5	<0.3	5	1	2	2300	4.4	<5
NT500-1D4		12000	<2	<2	260	<5	<0.3	6	1	2	3400	5.3	<5
NT-500-1-D4	Dup.	8200	<2	<2	190	<5	<0.3	4	1	<2	2400	3.7	<5
NT500-2D4		9300	<2	<2	180	<5	<0.3	6	1	<2	3400	4.3	<5
NT500-3D4		13000	<2	<2	220	<5	<0.3	7	1	4	3800	5.6	<5
NT500-4D4		11000	<2	<2	180	<5	<0.3	5	1	2	2400	4.4	<5
NT500-5D4		12000	<2	<2	210	<5	<0.3	6	1	2	3000	5.3	<5
NT500-5D4	Lab Dup.	13000	<2	<2	210	<5	<0.3	7	1	2	3700	5.4	<5
NT500-6D4		10000	<2	<2	180	<5	<0.3	5	1	<2	2400	4.3	<5
NT500-7D4		11000	<2	<2	210	<5	<0.3	7	1	2	3600	4.9	<5
NT500-8D4		6600	<2	<2	120	<5	<0.3	3	<1	<2	1300	3	<5
NT1000-1D4		13000	<2	<2	240	<5	<0.3	8	1	2	3800	7.4	<5
NT1000-3D4		12000	<2	<2	210	<5	<0.3	6	1	2	3500	5.6	<5
NT1000-5D4		11000	<2	<2	170	<5	<0.3	6	1	2	2700	4.7	<5
NT1000-7D4		14000	<2	<2	340	<5	<0.3	8	1	2	4100	6.2	<5
NT3000-1D4		15000	<2	<2	220	<5	<0.3	9	1	2	5900	6.1	<5
NT3000-3D4		13000	<2	<2	200	<5	<0.3	6	1	2	3400	5.4	<5
NT3000-5D4		9200	<2	<2	140	<5	<0.3	4	<1	<2	1800	4.1	<5
NT-3000-5-D4	Lab Dup.	8800	<2	<2	160	<5	<0.3	4	1	<2	2300	4.3	
NT3000-7D4		7500	<2	<2	120	<5	<0.3	3	<1	<2	1800	3.1	<5
NT5000-1D4		11000	<2	<2	150	<5	<0.3	5	1	2	2800	4.2	<5
NT5000-3D4		12000	<2	<2	190	<5	<0.3	6	1	2	3500	5.1	<5
NT5000-3D4	Lab Dup.	11000	<2	<2	180	<5	<0.3	6	1	2	3500	5	<5
NT5000-5D4		7900	<2	<2	130	<5	<0.3	4	<1	<2	1700	3.4	<5
NT5000-7D4		8800	<2	<2	150	<5	<0.3	4	1	<2	1900	3.7	<5
NT20000-3D4		5900	<2	<2	92	<5	<0.3	3	<1	<2	1200	2.6	<5
NT20000-7D4		6600	<2	<2	110	<5	<0.3	2	<1	<2	820	2.6	<5

TABLE 1a: Trace Elements at North Triumph Drill Site - Spring 2000 (Continued)

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
NT250-1D4		39	<2	<0.01	<2	<2	33	0.1	<2	0.2	5	4
NT250-3D4		120	<2	<0.01	2	<2	55	0.2	<2	0.4	10	8
NT250-5D4		110	<2	<0.01	2	<2	56	0.2	<2	0.3	9	7
NT250-7D4		62	<2	<0.01	2	<2	62	0.1	<2	0.3	6	7
NT500-1D4		140	<2	<0.01	2	<2	54	0.1	<2	0.4	9	9
NT500-1-D4	Dup.	80	<2	<0.01	<2	<2	40	0.1	<2	0.2	6	6
NT500-2D4		200	<2	<0.01	<2	<2	43	0.1	<2	0.4	8	8
NT500-3D4		160	<2	<0.01	2	<2	55	0.2	<2	0.4	10	14
NT500-4D4		91	<2	<0.01	<2	<2	48	0.1	<2	0.3	6	7
NT500-5D4		100	<2	<0.01	2	<2	51	0.1	<2	0.4	8	8
NT500-5D4	Lab Dup.	160	<2	<0.01	2	<2	53	0.1	<2	0.3	9	8
NT500-6D4		100	<2	<0.01	<2	<2	42	0.1	<2	0.3	6	7
NT500-7D4		170	<2	<0.01	2	<2	48	0.1	<2	0.4	9	8
NT500-8D4		39	<2	<0.01	<2	<2	30	0.1	<2	0.2	4	6
NT1000-1D4		140	<2	<0.01	2	<2	57	0.2	<2	0.4	10	10
NT1000-3D4		130	<2	<0.01	2	<2	50	0.2	<2	0.3	9	9
NT1000-5D4		110	<2	<0.01	2	<2	44	0.1	<2	0.4	7	10
NT1000-7D4		160	<2	<0.01	2	<2	60	0.2	<2	0.4	10	12
NT3000-1D4		240	<2	<0.01	2	<2	57	0.2	<2	0.5	13	11
NT3000-3D4		130	<2	<0.01	2	<2	52	0.1	<2	0.4	9	8
NT3000-5D4		55	<2	<0.01	<2	<2	39	0.1	<2	0.2	5	6
NT3000-5-D4	Lab Dup.	66	<2	<0.01	<2	<2	42	0.1	<2	0.2	6	5
NT3000-7D4		76	<2	<0.01	<2	<2	30	0.1	<2	0.2	4	5
NT5000-1D4		140	<2	<0.01	2	<2	44	0.2	<2	0.3	8	7
NT5000-3D4		110	<2	<0.01	2	<2	50	0.1	<2	0.3	9	8
NT5000-3D4	Lab Dup.	130	<2	<0.01	2	<2	47	0.2	<2	0.4	9	10
NT5000-5D4		46	<2	<0.01	<2	<2	36	0.1	<2	0.2	5	5
NT5000-7D4		66	<2	<0.01	<2	<2	38	0.1	<2	0.3	5	6
NT20000-3D4		22	<2	<0.01	<2	<2	24	0.1	<2	0.2	4	4
NT20000-7D4		18	<2	<0.01	<2	<2	26	0.1	<2	0.1	2	4

TABLE 2a: Petroleum Hydrocarbons at North Triumph Drill Site - Spring 2000

Unique_station_id	Replicate_id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₆ -C ₁₀ mg/kg	C ₁₁ -C ₁₄ mg/kg	C ₁₅ -C ₁₈ mg/kg	TEH (C ₁₁ -C ₁₈) mg/kg
NT250-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	163	3.67	166.67
NT250-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	8.28	1.33	9.61
NT250-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	13.5	0.993	14.493
NT250-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3090	18.4	3108.4
NT500-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.05	1.52	4.57
NT-500-1-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	7.18	0.929	8.109
NT500-2D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.8	0.577	1.377
NT500-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.484	0.777	1.261
NT500-4D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.306	0.607	0.913
NT500-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.27	1.08	3.35
NT500-5D4	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	2.34	0.845	3.185
NT500-6D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.526	0.515	1.041
NT500-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	11.5	0.612	12.112
NT500-8D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	3.65	0.637	4.287
NT1000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.505	0.832	1.337
NT1000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	0.665	0.665
NT1000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	0.516	0.516
NT1000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.75	0.844	2.594
NT3000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT3000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT3000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-3000-5-D4	Field Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT3000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT5000-1D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT5000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT5000-3D4	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT5000-5D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT5000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.2	0.626	1.826
NT20000-3D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT20000-7D4		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50

TABLE 3a: Polycyclic Aromatic Hydrocarbons at North Triumph Drill Site - Spring 2000 (Continued)

Unique_station_id	Replicate_id	Indroa(1,2,3-cd)pyrene mg/kg	Dibenz(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
NT250-1D4		< 0.05	< 0.05	< 0.05
NT250-3D4		< 0.05	< 0.05	< 0.05
NT250-5D4		< 0.05	< 0.05	< 0.05
NT250-7D4		< 0.05	< 0.05	< 0.05
NT500-1D4		< 0.05	< 0.05	< 0.05
NT-500-1-D4	Field Dup.	< 0.05	< 0.05	< 0.05
NT500-2D4		< 0.05	< 0.05	< 0.05
NT500-3D4		< 0.05	< 0.05	< 0.05
NT500-4D4		< 0.05	< 0.05	< 0.05
NT500-5D4		< 0.05	< 0.05	< 0.05
NT500-5D4	Lab Dup.	< 0.05	< 0.05	< 0.05
NT500-6D4		< 0.05	< 0.05	< 0.05
NT500-7D4		< 0.05	< 0.05	< 0.05
NT500-8D4		< 0.05	< 0.05	< 0.05
NT1000-1D4		< 0.05	< 0.05	< 0.05
NT1000-3D4		< 0.05	< 0.05	< 0.05
NT1000-5D4		< 0.05	< 0.05	< 0.05
NT1000-7D4		< 0.05	< 0.05	< 0.05
NT3000-1D4		< 0.05	< 0.05	< 0.05
NT3000-3D4		< 0.05	< 0.05	< 0.05
NT3000-5D4		< 0.05	< 0.05	< 0.05
NT-3000-5-D4	Field Dup.	< 0.05	< 0.05	< 0.05
NT3000-7D4		< 0.05	< 0.05	< 0.05
NT5000-1D4		< 0.05	< 0.05	< 0.05
NT5000-3D4		< 0.05	< 0.05	< 0.05
NT5000-3D4	Lab Dup.	< 0.05	< 0.05	< 0.05
NT5000-5D4		< 0.05	< 0.05	< 0.05
NT5000-7D4		< 0.05	< 0.05	< 0.05
NT20000-3D4		< 0.05	< 0.05	< 0.05
NT20000-7D4		< 0.05	< 0.05	< 0.05

TABLE 4a: Sediment Quality at North Triumph Drill Site - Spring 2000

Unique station id	Replicate id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
NT250-1D4		0.4	0.2	0.2	< 0.1	97.7	1	1.3	19	78
NT250-3D4		1.2	1	0.2	0.2	97.6	0.9	1.3	19	78
NT250-5D4		1.1	0.1	1	< 0.1	97.4	1.3	1.3	19	78
NT250-7D4		1.4	0.4	1	< 0.1	97.2	1.3	1.6	19	76
NT500-1D4		0.8	< 0.1	0.8	< 0.1	98.2	0.6	1.2	19	0
NT-500-1-D4	Field Dup.	0.6	0.2	0.4	0.1	98.6	0.2	1	17	73
NT500-2D4		0.5	0.1	0.4	< 0.1	98.7	0.3	1	19	72
NT500-3D4		1.1	0.1	1	< 0.1	97.8	0.9	1.4	19	76
NT500-4D4		0.9	0.1	0.8	2.3	96.2	0.3	1.2	18	78
NT500-5D4		1.2	0.2	1	0.2	97.8	0.8	1.3	19	77
NT500-5D4	Lab Dup.	1.2	0.1	1.1	< 0.1	97.5	1.1	1.5	18	0
NT500-6D4		0.6	0.1	0.5	< 0.1	98.6	0.4	1	16	76
NT500-7D4		0.8	0.1	0.7	1.7	96.3	0.9	1.1	16	75
NT500-8D4		0.4	< 0.1	0.4	0.1	98.4	0.4	1	17	75
NT1000-1D4		1.2	0.2	1	< 0.1	97.4	1.3	1.4	19	74
NT1000-3D4		1.1	0.1	1	< 0.1	97.5	1.2	1.3	17	76
NT1000-5D4		0.9	< 0.1	0.9	< 0.1	97.9	0.8	1.2	17	80
NT1000-7D4		1.3	0.2	1.1	< 0.1	95.7	2.7	1.6	19	0
NT3000-1D4		1.1	0.1	1	< 0.1	98	0.7	1.2	19	0
NT3000-3D4		1.2	0.2	1	< 0.1	97.4	1.3	1.3	19	78
NT3000-5D4		0.6	0.1	0.5	0.1	98.1	0.5	1.3	16	88
NT-3000-5-D4	Field Dup.	0.9	0.3	0.6	< 0.1	98.1	0.6	1.3	17	0
NT3000-7D4		0.6	< 0.1	0.6	< 0.1	98.6	0.2	1.2	16	76
NT5000-1D4		1.1	0.1	1	0.2	97	1.1	1.6	19	58
NT5000-3D4		1	0.2	0.8	0.2	97.6	0.7	1.4	17	78
NT5000-3D4	Lab Dup.	0.9	0.1	0.8	< 0.1	97.7	0.9	1.4	17	0
NT5000-5D4		0.7	0.2	0.5	0.1	98.4	0.5	1	16	96
NT5000-7D4		0.3	< 0.1	0.4	< 0.1	98.8	0.3	1	16	76
NT20000-3D4		0.3	0.1	0.2	< 0.1	98.8	0.3	0.8	15	74
NT20000-7D4		0.4	0.1	0.3	< 0.1	98.8	0.1	1.1	15	73

TABLE 5a: Toxicity at North Triumph Drill Site - Spring 2000

Unique_station_id	Replicate_id	Amphipod Survival Mortality %	Microtox EC50
NT250-1D4		5	49573 mg/L
NT250-3D4		10	> 98684mg/L
NT250-5D4		3	> 98684mg/L
NT250-7D4		5	96440 mg/L
NT500-1D4		4	> 98684mg/L
NT-500-1-D4	Field Dup.	1	> 98684mg/L
NT500-2D4		7	> 98684mg/L
NT500-3D4		15	> 98684mg/L
NT500-4D4		4	> 98684mg/L
NT500-5D4		9	85883 mg/L
NT500-5D4	Lab Dup.		
NT500-6D4		21	> 98684mg/L
NT500-7D4		1	> 98684mg/L
NT500-8D4		9	> 98684mg/L
NT1000-1D4		13	> 98684mg/L
NT1000-3D4		8	98452 mg/L
NT1000-5D4		11	82092 mg/L
NT1000-7D4		9	> 98684mg/L
NT3000-1D4			
NT3000-3D4			
NT3000-5D4			
NT-3000-5-D4	Field Dup.		
NT3000-7D4			
NT5000-1D4			
NT5000-3D4			
NT5000-3D4	Lab Dup.		
NT5000-5D4			
NT5000-7D4			
NT20000-3D4		5	> 98684mg/L
NT20000-7D4		6	> 98684mg/L

**Laboratory Analytical Results
for Sediment from North Triumph Field, November 2000**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Polycyclic Aromatic Hydrocarbons
- Table 4: Sediment Quality
- Table 5: Toxicity

TABLE 1b: Trace Elements at North Triumph Drill Site - Fall 2000

Unique station id	Replicate id	Aluminum mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Iron mg/kg	Lead mg/kg	Lithium mg/kg
NT-250-1-D5		9100	<2	<2	550	<5	<0.3	5	1	2	2900	4.3	<5
NT-250-2-D5		6400	<2	<2	250	<5	<0.3	3	<1	5	1300	3.3	<5
NT-250-3-D5		12000	<2	2	350	<5	<0.3	8	1	3	3900	6.6	<5
NT-250-4-D5		11000	<2	<2	220	<5	<0.3	6	1	2	3200	5.6	<5
NT-250-5-D5		10000	<2	<2	190	<5	<0.3	5	1	<2	2400	4.8	<5
NT-250-6-D5		6600	<2	<2	140	<5	<0.3	3	<1	<2	1500	3.2	<5
NT-250-7-D5		6600	<2	<2	420	<5	<0.3	4	1	<2	2000	3.3	<5
NT-250-8-D5		5600	<2	<2	210	<5	<0.3	2	<1	<2	1000	2.9	<5
NT-500-1-D5		9200	<2	<2	200	<5	<0.3	4	1	<2	2200	4.4	<5
NT-500-2-D5		9000	<2	<2	160	<5	<0.3	4	1	2	2100	4.5	<5
NT-500-2-D5	Lab Dup.	8600	<2	<2	160	<5	<0.3	5	1	2	2600	4.5	<5
NT-500-3-D5		11000	<2	<2	210	<5	<0.3	6	1	2	3100	5.9	<5
NT-500-4-D5		9600	<2	<2	180	<5	<0.3	5	1	60	2800	4.9	<5
NT-500-5-D5		9600	<2	<2	170	<5	<0.3	5	1	2	2800	4.9	<5
NT-500-6-D5		7800	<2	<2	150	<5	<0.3	4	1	<2	1900	4	<5
NT-500-7-D5		9600	<2	<2	260	<5	<0.3	4	1	2	1800	4.2	<5
NT-500-8-D5		10000	<2	<2	270	<5	<0.3	4	1	2	2600	4.5	<5
NT-1000-1-D5		11000	<2	<2	200	<5	<0.3	6	1	2	3300	5.2	<5
NT-1000-3-D5		11000	<2	<2	200	<5	<0.3	7	1	3	3700	5.5	<5
NT-1000-5-D5		9000	<2	<2	160	<5	<0.3	4	1	<2	2300	4.4	<5
NT-1000-7-D5		11000	<2	<2	210	<5	<0.3	6	1	2	3600	5.5	<5
NT-1000-7-D5	Lab Dup.	11000	<2	<2	210	<5	<0.3	7	1	2	3600	5.4	<5
NT-3000-1-D5		14000	<2	2	210	<5	<0.3	8	1	2	4600	6	<5
NT-3000-3-D5		10000	<2	<2	170	<5	<0.3	5	1	2	2900	4.9	<5
NT-3000-5-D5		8700	<2	<2	140	<5	<0.3	4	1	<2	2300	4.2	<5
NT-3000-7-D5		8800	<2	<2	150	<5	<0.3	4	1	<2	2100	4.1	<5
NT-5000-1-D5		9400	<2	<2	170	<5	<0.3	5	1	<2	2500	4.3	<5
NT-5000-3-D5		8800	<2	<2	160	<5	<0.3	4	1	3	2100	4.2	<5
NT-5000-5-D5		7700	<2	<2	130	<5	<0.3	4	1	<2	2000	3.7	<5
NT-5000-7-D5		8100	<2	<2	150	<5	<0.3	4	<1	<2	2000	4.2	<5
NT-20000-3-D5		8600	<2	<2	140	<5	<0.3	5	1	2	2500	4	<5
NT-20000-7-D5		5300	<2	<2	100	<5	<0.3	2	<1	<2	700	2.3	<5

TABLE 1b: Trace Elements at North Triumph Drill Site - Fall 2000

Unique_station_id	Replicate_id	Manganese mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Strontium mg/kg	Thallium mg/kg	Tin mg/kg	Uranium mg/kg	Vanadium mg/kg	Zinc mg/kg
NT-250-1-D5		120	<2	<0.01	<2	<2	52	0.1	<2	0.3	8	6
NT-250-2-D5		32	<2	<0.01	<2	<2	33	0.1	<2	0.4	4	4
NT-250-3-D5		110	<2	<0.01	2	<2	60	0.2	<2	0.4	10	9
NT-250-4-D5		98	<2	<0.01	2	<2	54	0.2	<2	0.3	8	7
NT-250-5-D5		64	<2	<0.01	2	<2	46	0.2	<2	0.3	7	6
NT-250-6-D5		53	<2	<0.01	<2	<2	34	0.1	<2	0.2	4	4
NT-250-7-D5		80	<2	<0.01	<2	<2	42	0.1	<2	0.2	6	6
NT-250-8-D5		25	<2	<0.01	<2	<2	31	0.1	<2	0.2	3	6
NT-500-1-D5		58	<2	<0.01	<2	<2	44	0.1	<2	0.3	6	5
NT-500-2-D5		76	<2	<0.01	<2	<2	43	0.1	<2	0.2	7	5
NT-500-2-D5	Lab Dup.	91	<2	<0.01	<2	<2	44	0.1	<2	0.2	8	6
NT-500-3-D5		90	<2	<0.01	2	<2	54	0.2	<2	0.3	9	7
NT-500-4-D5		98	<2	<0.01	<2	<2	48	0.2	<2	0.3	8	6
NT-500-5-D5		83	<2	<0.01	2	<2	44	0.1	<2	0.3	8	6
NT-500-6-D5		64	<2	<0.01	<2	<2	37	0.1	<2	0.2	6	5
NT-500-7-D5		40	<2	<0.01	<2	<2	46	0.2	<2	0.2	5	6
NT-500-8-D5		58	<2	<0.01	<2	<2	48	0.2	<2	0.2	7	6
NT-1000-1-D5		110	<2	<0.01	2	<2	50	0.2	<2	0.3	9	8
NT-1000-3-D5		130	<2	<0.01	2	<2	51	0.2	<2	0.4	10	8
NT-1000-5-D5		67	<2	<0.01	<2	<2	42	0.1	<2	0.2	6	5
NT-1000-7-D5		120	<2	<0.01	2	<2	52	0.2	<2	0.4	10	8
NT-1000-7-D5	Lab Dup.	130	<2	<0.01	2	<2	51	0.1	<2	0.4	10	8
NT-3000-1-D5		190	<2	<0.01	2	<2	56	0.2	<2	0.6	12	10
NT-3000-3-D5		91	<2	<0.01	<2	<2	44	0.1	<2	0.3	8	7
NT-3000-5-D5		73	<2	<0.01	<2	<2	41	0.1	<2	0.3	6	5
NT-3000-7-D5		77	<2	<0.01	<2	<2	42	0.1	<2	0.2	5	6
NT-5000-1-D5		95	<2	<0.01	<2	<2	42	0.2	<2	0.3	7	5
NT-5000-3-D5		64	<2	<0.01	<2	<2	40	0.1	<2	0.2	7	5
NT-5000-5-D5		70	<2	<0.01	<2	<2	37	0.1	<2	0.2	5	7
NT-5000-7-D5		61	<2	<0.01	<2	<2	38	0.1	<2	0.2	6	5
NT-20000-3-D5		59	<2	<0.01	<2	<2	37	0.1	<2	0.3	7	6
NT-20000-7-D5		13	<2	<0.01	<2	<2	25	0.1	<2	0.1	3	3

TABLE 2b: Petroleum Hydrocarbons at North Triumph Drill Site - Fall 2000

Unique station id	Replicate id	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	C ₉ -C ₁₀ mg/kg	C ₁₁ -C ₁₄ mg/kg	C ₁₅ -C ₁₈ mg/kg	TEH (C ₁₁ -C ₁₈) mg/kg
NT-250-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	73.2	0.665	73.87
NT-250-2-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	12.7	0.839	13.54
NT-250-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	4.23	0.383	4.61
NT-250-4-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-250-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.372	< 0.25	0.37
NT-250-6-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.04	0.453	1.49
NT-250-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	44.6	1.21	45.81
NT-250-8-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	5.82	< 0.25	5.82
NT-500-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.855	< 0.25	0.86
NT-500-2-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.646	< 0.25	0.65
NT-500-2-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.66	< 0.25	0.66
NT-500-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.579	< 0.25	0.58
NT-500-4-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-500-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-500-6-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-500-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	25.6	1.13	26.73
NT-500-8-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	11	0.679	11.68
NT-1000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-1000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-1000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-1000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	0.327	< 0.25	0.33
NT-1000-7-D5	Lab Dup.	< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	1.07	< 0.25	1.07
NT-3000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-3000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-3000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-3000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-5000-1-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-5000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-5000-5-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-5000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-20000-3-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50
NT-20000-7-D5		< 0.025	< 0.025	< 0.025	< 0.05	< 2.5	< 0.25	< 0.25	< 0.50

TABLE 3b: Polycyclic Aromatic Hydrocarbons at North Triumph Drill Site - Fall 2000

Unique station_id	Replicate_id	Fluoranthene mg/kg	Pyrene mg/kg	Benz(a)anthracene mg/kg	Chrysene mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)pyrene mg/kg
NT-250-1-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-2-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-3-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-4-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-5-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-6-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-7-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-250-8-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-1-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-2-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-2-D5	Lab Dup.	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-3-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-4-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-5-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-6-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-7-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-500-8-D5		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
NT-1000-1-D5								
NT-1000-3-D5								
NT-1000-5-D5								
NT-1000-7-D5								
NT-1000-7-D5	Lab Dup.							
NT-3000-1-D5								
NT-3000-3-D5								
NT-3000-5-D5								
NT-3000-7-D5								
NT-5000-1-D5								
NT-5000-3-D5								
NT-5000-5-D5								
NT-5000-7-D5								
NT-20000-3-D5								
NT-20000-7-D5								

TABLE 3b: Polycyclic Aromatic Hydrocarbons at North Triumph Drill Site - Fall 2000

Unique station ID	Replicate ID	Indeno(1,2,3-cd)pyrene mg/kg	Dibenzo(a,h)anthracene mg/kg	Benzo(ghi)perylene mg/kg
NT-250-1-D5		< 0.05	< 0.05	< 0.05
NT-250-2-D5		< 0.05	< 0.05	< 0.05
NT-250-3-D5		< 0.05	< 0.05	< 0.05
NT-250-4-D5		< 0.05	< 0.05	< 0.05
NT-250-5-D5		< 0.05	< 0.05	< 0.05
NT-250-6-D5		< 0.05	< 0.05	< 0.05
NT-250-7-D5		< 0.05	< 0.05	< 0.05
NT-250-8-D5		< 0.05	< 0.05	< 0.05
NT-500-1-D5		< 0.05	< 0.05	< 0.05
NT-500-2-D5		< 0.05	< 0.05	< 0.05
NT-500-2-D5	Lab Dup.	< 0.05	< 0.05	< 0.05
NT-500-3-D5		< 0.05	< 0.05	< 0.05
NT-500-4-D5		< 0.05	< 0.05	< 0.05
NT-500-5-D5		< 0.05	< 0.05	< 0.05
NT-500-6-D5		< 0.05	< 0.05	< 0.05
NT-500-7-D5		< 0.05	< 0.05	< 0.05
NT-500-8-D5		< 0.05	< 0.05	< 0.05
NT-1000-1-D5				
NT-1000-3-D5				
NT-1000-5-D5				
NT-1000-7-D5				
NT-1000-7-D5	Lab Dup.			
NT-3000-1-D5				
NT-3000-3-D5				
NT-3000-5-D5				
NT-3000-7-D5				
NT-5000-1-D5				
NT-5000-3-D5				
NT-5000-5-D5				
NT-5000-7-D5				
NT-20000-3-D5				
NT-20000-7-D5				

TABLE 4b: Sediment Quality at North Triumph Drill Site - Fall 2000

Unique station id	Replicate id	Total Carbon mg/kg	Total Inorg. Carbon g/kg	Total Org. Carbon g/kg	Gravel_%	Sand_%	Silt_%	Clay_%	Moisture	Depth m
NT-250-1-D5		0.9	0.7	0.2	<0.1	98.3	0.3	1.1	18	75
NT-250-2-D5		0.7	0.6	0.1	<0.1	99.2	0.2	0.5	16	77
NT-250-3-D5		2.1	1.7	0.4	<0.1	96.1	2	1.9	23	74
NT-250-4-D5		1.1	0.9	0.2	<0.1	97.6	1.1	1.3	19	80
NT-250-5-D5		1.3	1	0.3	<0.1	97.9	0.8	1.3	19	80
NT-250-6-D5		0.5	0.4	0.1	<0.1	98.9	0.2	1	17	77
NT-250-7-D5		0.5	0.4	0.1	<0.1	98.9	0.2	0.9	16	85
NT-250-8-D5		0.6	0.5	0.1	<0.1	98.9	0.2	0.9	17	74.5
NT-500-1-D5		1	0.8	0.2	<0.1	98.6	0.3	1.1	17	80
NT-500-2-D5		0.6	0.6	<0.1	<0.1	98.7	0.3	1	17	76
NT-500-2-D5	Lab Dup.	0.7	0.5	0.2	<0.1	98.7	0.3	1	16	76
NT-500-3-D5		1.3	1	0.3	<0.1	98	0.8	1.2	19	75
NT-500-4-D5		0.9	0.7	0.2	0.5	98.2	0.3	1	17	81
NT-500-5-D5		1.1	0.8	0.3	<0.1	98	0.7	1.3	18	80.5
NT-500-6-D5		0.7	0.5	0.2	<0.1	98.6	0.3	1	17	81
NT-500-7-D5		1	0.8	0.2	0.1	98.1	0.6	1.3	18	79
NT-500-8-D5		1.3	1	0.3	<0.1	97.3	1.2	1.5	20	84
NT-1000-1-D5		1.2	0.9	0.3	<0.1	97.7	1	1.3	17	70.6
NT-1000-3-D5		1.3	1	0.3	<0.1	97.5	1.2	1.4	19	74
NT-1000-5-D5		1	0.8	0.2	<0.1	97.8	0.9	1.2	17	82
NT-1000-7-D5		1.2	0.9	0.3	<0.1	97.5	1.2	1.3	16	74-75
NT-1000-7-D5	Lab Dup.	1.3	0.9	0.4	<0.1	97.3	1.5	1.3	16	74-75
NT-3000-1-D5		1.2	1	0.2	<0.1	97.8	0.6	1.6	20	63
NT-3000-3-D5		1.3	1	0.3	<0.1	97.6	1	1.4	18	80
NT-3000-5-D5		1.2	0.9	0.3	<0.1	97.8	0.8	1.4	18	95
NT-3000-7-D5		0.6	0.5	0.1	<0.1	98.7	0.2	1	16	74
NT-5000-1-D5		1.4	1.1	0.3	<0.1	98.2	0.5	1.3	19	57
NT-5000-3-D5		0.9	0.7	0.2	<0.1	98.5	0.4	1.1	18	78
NT-5000-5-D5		0.8	0.5	0.3	<0.1	98.3	0.6	1.1	16	98
NT-5000-7-D5		1	0.9	0.1	<0.1	98.1	0.5	1.4	16	74
NT-20000-3-D5		0.8	0.7	0.1	<0.1	98.5	0.5	1	16	75
NT-20000-7-D5		0.4	0.3	0.1	0.3	98.8	0.1	0.9	17	75

TABLE 5b: Toxicity at North Triumph Drill Site - Fall 2000

Unique station id	Replicate id	Amphipod Survival Mortality %	Microtox EC50
NT-250-1-D5		8	>98684
NT-250-2-D5		13	>98684
NT-250-3-D5		4	>98684
NT-250-4-D5		10	>98684
NT-250-5-D5		8	>98684
NT-250-6-D5		9	>98684
NT-250-7-D5		8	>98684
NT-250-8-D5		6	>98684
NT-500-1-D5		7	>98684
NT-500-2-D5		7	>98684
NT-500-2-D5	Lab Dup.		
NT-500-3-D5		4	>98684
NT-500-4-D5		1	>98684
NT-500-5-D5		6	>98684
NT-500-6-D5		4	>98684
NT-500-7-D5		3	53862
NT-500-8-D5		20	>98684
NT-1000-1-D5		14	>98684
NT-1000-3-D5		5	>98684
NT-1000-5-D5		4	>98684
NT-1000-7-D5		3	>98684
NT-1000-7-D5	Lab Dup.		
NT-3000-1-D5			
NT-3000-3-D5			
NT-3000-5-D5			
NT-3000-7-D5			
NT-5000-1-D5			
NT-5000-3-D5			
NT-5000-5-D5			
NT-5000-7-D5			
NT-20000-3-D5		3	>98684
NT-20000-7-D5		5	>98684

**Laboratory Analytical Results
for Sediment from North Triumph Field, June 2001**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Toxicity

TABLE 1: Trace Elements at North Triumph Gas Field - Spring 2001

Unique_station_id	Sulphide	Barium	Ammonia
	mg/kg	mg/kg	mg/kg
NT-250-1	<20	180	11.5
NT-250-3	<20	250	12.3
NT-250-3-Field Dup	<20	350	18.8
NT-250-5	<20	230	11.2
NT-250-7	<20	390	7.2
NT-500-1	<20	170	36.7
NT-500-3	<20	220	14.1
NT-500-5	<20	190	7.88
NT-500-7	<20	220	13.8
NT-1000-1	<20	230	12.9
NT-1000-3	<20	200	6.49
NT-1000-5	<20	180	19.8
NT-1000-5- Field Dup	<20	170	4.5
NT-1000-7	<20	200	7.32
NT-1000-7-Lab Dup	<20	190	6.24
NT-3000-1		240	
NT-3000-3		240	
NT-3000-5		170	
NT-3000-7		130	
NT-5000-1		170	
NT-5000-3		180	
NT-5000-5		130	
NT-5000-5-Lab Dup		140	
NT-5000-7		170	
NT-20000-3		170	
NT-20000-7		110	

TABLE 2: Petroleum Hydrocarbons at North Triumph Gas Field - Spring 2001

Unique_station_id	Benzene	Toluene	Ethylbenzene	Xylenes	C ₆ -C ₁₀	C ₁₁ -C ₁₅	C ₁₆ -C ₂₀	TEH (C ₁₁ -C ₂₀)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NT-250-1	<0.025	<0.025	<0.025	<0.050	<2.5	1.01	0.417	<3.0
NT-250-3	<0.025	<0.025	<0.025	<0.050	<2.5	0.5	0.5	<3.0
NT-250-3-Field Dup	<0.025	<0.025	<0.025	<0.050	<2.5	0.412	0.625	<3.0
NT-250-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.443	<3.0
NT-250-7	<0.025	<0.025	<0.025	<0.050	<2.5	2.8	0.744	<3.0
NT-500-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.422	<3.0
NT-500-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.506	<3.0
NT-500-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.341	<3.0
NT-500-7	<0.025	<0.025	<0.025	<0.050	<2.5	1.23	0.519	<3.0
NT-1000-1	<0.025	<0.025	<0.025	<0.050	<2.5	0.329	0.512	<3.0
NT-1000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.463	<3.0
NT-1000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.519	<3.0
NT-1000-5- Field Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.607	<3.0
NT-1000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.732	<3.0
NT-1000-7-Lab Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.614	<3.0
NT-3000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.494	<3.0
NT-3000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.5	<3.0
NT-3000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.506	<3.0
NT-3000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.415	<3.0
NT-5000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.524	<3.0
NT-5000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.537	<3.0
NT-5000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.537	<3.0
NT-5000-5-Lab Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.464	<3.0
NT-5000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.482	<3.0
NT-20000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.893	<3.0
NT-20000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.250	0.465	<3.0

Table 3: Toxicity at NorthnTriumph Gas Field - Spring 2001

Unique_station_id	Amphipod Survival
	Mortality %
NT-250-1	5
NT-250-3	9
NT-250-3-Field Dup	9
NT-250-5	14
NT-250-7	2
NT-500-1	5
NT-500-3	1
NT-500-5	7
NT-500-7	16
NT-1000-1	2
NT-1000-3	5
NT-1000-5	10
NT-1000-5- Field Dup	8
NT-1000-7	4

**Laboratory Analytical Results
for Sediment from North Triumph Field, July 2002**

- Table 1: Trace Elements
- Table 2: Petroleum Hydrocarbons
- Table 3: Toxicity

TABLE 1: Trace Elements at North Triumph Gas Field - Summer 2002

Unique_station_id	Sulphide	Barium	Ammonia
	mg/kg	mg/kg	mg/kg
NT-250-1	47	99	4.34
NT-250-3	47	290	4.04
NT-250-5	38	190	9.36
NT-250-7	24	820	3.64
NT-500-1	44	190	2.59
NT-500-3	<20	220	8.94
NT-500-5	<20	190	4.94
NT-500-7	<20	170	2.26
NT-1000-1	<20	200	3.88
NT-1000-3	<20	170	12.4
NT-1000-3 - Lab Dup.	<20	190	12.1
NT-1000-5	<20	190	2.69
NT-1000-7	<20	190	3.06
NT-3000-1	<20	230	3.52
NT-3000-1 - Field Dup.	<20	230	4.06
NT-3000-3	28	190	5.56
NT-3000-5	<20	150	5.56
NT-3000-7	27	100	0.43
NT-5000-1	<20	160	5.44
NT-5000-3	<20	170	1.89
NT-5000-5	32	130	1.04
NT-5000-5-Lab Dup	46	140	1.1
NT-5000-7	<20	170	3.95
NT-20000-3	36	180	2.23
NT-20000-7	<20	130	0.8

TABLE 2: Petroleum Hydrocarbons at North Triumph Gas Field - Summer 2002

Unique_station_id	Benzene	Toluene	Ethylbenzene	Xylenes	C ₄ -C ₁₀	C ₁₁ -C ₂₀	C ₂₁ -C ₃₀	TEH (C ₁₁ -C ₃₀)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NT-250-1	<0.025	<0.025	<0.025	<0.050	<2.5	1.24	0.957	
NT-250-3	<0.025	<0.025	<0.025	<0.050	<2.5	0.782	0.919	
NT-250-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-250-7	<0.025	<0.025	<0.025	<0.050	<2.5	158	5.7	
NT-500-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-500-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-500-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-500-7	<0.025	<0.025	<0.025	<0.050	<2.5	0.488	<0.25	
NT-1000-1	<0.025	<0.025	<0.025	<0.050	<2.5	0.338	<0.25	
NT-1000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-1000-3 - Lab Dup.	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-1000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-1000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-3000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-3000-1 - Field Dup.	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-3000-3	<0.025	<0.025	<0.025	<0.050	<2.5	0.388	0.389	
NT-3000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-3000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-5000-1	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-5000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-5000-5	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-5000-5-Lab Dup	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-5000-7	<0.025	<0.025	<0.025	<0.050	<2.5	0.444	<0.25	
NT-20000-3	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	
NT-20000-7	<0.025	<0.025	<0.025	<0.050	<2.5	<0.25	<0.25	

Table 3: Toxicity at NorthnTriumph Gas Field - Summer 2002

Unique_station_id	Amphipod Survival	
	Mortality	%
NT-250-1	5	
NT-250-3	13	
NT-250-5	21	
NT-250-7	18	
NT-500-1	7	
NT-500-3	7	
NT-500-5	12	
NT-501-7	4	
NT-1000-1	5	
NT-1000-3	16	
NT-1000-5	9	
NT-1000-7	9	

APPENDIX C

SEDIMENT BIOASSAYS

**TOXICITY TEST RESULTS OF 37 SEDIMENT SAMPLES
FOR THE SOEI OFFSHORE ENVIRONMENTAL EFFECTS
MONITORING BASELINE STUDY**

Prepared For

JACQUES WHITFORD ENVIRONMENTAL

Prepared By

Gary Harris
Harris Industrial Testing Service Ltd.
1320 Ashdale Rd.
South Rawdon
Nova Scotia, Canada
B0N 1Z0

August 2002

INTRODUCTION

This report summarizes the test results of 37 samples submitted to this lab for the SOEI Offshore Environmental Effects Monitoring Baseline Study. The samples were collected July 6 - July 10, 2002, and were received at the lab on July 12, 2002. All samples were held at 4⁰ C until testing.

One type of test was conducted:

1. Amphipod Survival: the test organism, *Rhepoxynius abronius* were supplied by Environmental Resolution Services of Vancouver, British Columbia and acclimated to laboratory conditions before exposure to the sediments.

The amphipod survival test is designed to evaluate the toxicity of samples of marine sediment with a biological end point of mortality.

The tests were conducted July 22 – Aug. 1, 2002.

Amphipods were received and acclimated to the test water on July 20, 2002.

METHOD

Rhepoxynius abronius

The test with *R. abronius* was conducted in accordance with "Biological Test Method: Acute Test for Sediment Toxicity Using Marine or Estuarine Amphipods" Report EPS 1/RM/26 December 1992 with Oct. 98 amendments. The static test, a 10 day exposure, is conducted in 1 litre glass jars with 175 mls of sediment made up to 950 mls with clean sea water, $15 \pm 2^{\circ} \text{C}$, and salinity 30 ± 2 ppt. The tests are aerated throughout with minimal aeration (2 – 3 bubbles /sec/L). Lighting is provided by overhead continuous fluorescent illumination @ 550 lux at surface. Five replicates with 20 individuals per replicate are run for each sample plus control of five replicates with sediment from the organism collection site.

A reference toxicant, cadmium chloride, is conducted with each batch of *R. abronius* to determine their relative sensitivity. The reference toxicant test is conducted for 96 hours in sea water only.

Observations are made daily for air flow and amphipods floating on or at the sediment surface. Measurements of temperature, pH, salinity and D.O. are monitored throughout the test.

RESULTS

Rhepoxynius abronius

The results with the reference toxicant Cadmium chloride were within acceptable levels of values when compared to historical values previously obtained by this lab (Table 1). All monitored levels of dissolved oxygen, pH, and temperature were within acceptable levels initially and at termination. The mortality results are presented in Table 2.

Environment Canada EPS 1/RM/35 December 1998, recommends the following two-part guidance when judging the pass/fail of each sediment: "Test sediment from a particular sampling station and depth is judged to have failed this sediment toxicity test if the mean 10-day survival rate for the replicate groups of test organisms exposed to this sediment is more than 20% lower than that in the reference sediment and is significantly different. Reference sediment is defined as a field collected sample of presumably clean (uncontaminated) sediment, selected for properties (e.g., particle size, compactness, total organic content) representing sediment conditions that closely match those of the sample(s) of test sediment except for the degree of chemical contaminants." As this and previous tests in this series lack a reference sediment, the test sediment is judged to have failed this sediment toxicity test if the mean 10-day survival for the replicate groups of test organisms exposed to this sediment is more than 30% lower than that in the control sediment and is significantly different. Control sediment is defined as "clean sediment which does not contain concentrations of one or more contaminants that could affect the survival or behavior of the test organisms. Control sediment might be natural sediment from an uncontaminated site, or formulated (reconstituted) sediment. This sediment must contain no added test material or substance, and must enable an acceptable survival rate for the test organisms during the test. The use of control sediment provides a basis for interpreting data derived from toxicity tests using test sediment(s)." The control sediment used for these tests was the normal sediment from the *Rhepoxynius* habitat.

Based on this criteria only one sample, T-250-3, is considered to be toxic. The sample was noted to have an oily smell upon starting the tests and oily globules were observed upon sieving at termination. T-250-3 duplicate was the only duplicate sample and gave similar results to T-250-3..

The duplicate sample results are shown in Table 3.

Table 1

***Rhepoxinius abronius* Reference Toxicant Results
with Cadmium chloride**

Test	96 Hour LC50 (mg/L)
July 22 - 26 2002	1.27 (1.03 - 1.56)
Historical Mean	1.83
Warning Limits	0.72 - 4.69

Table 2

Toxicity Summary for *Rhepoxynius abronius* (conducted July 22 – Aug. 1, 2002)

Client Sample ID	HITS Sample ID	Mortality					Total	Mean of x	Standard Deviation
		Rep. 1	Rep. 2	Rep. 3	Rep. 4	Rep. 5			
Control		0/20	1/20	1/20	0/20	2/20	4	0.8	0.84
T 250 1	2-1	0/20	0/20	0/20	0/20	2/20	2	0.4	0.89
T 250 3	2-2	8/20	8/20	13/20	9/20	9/20	47	9.4	2.07
T 250 5	2-3	0/20	0/20	1/20	0/20	0/20	1	0.2	0.45
T 250 7	2-4	0/20	1/20	1/20	0/20	0/20	2	0.4	0.55
T 500 1	2-5	0/20	1/20	0/20	2/20	1/20	4	0.8	0.84
T 500 3	2-6	1/20	0/20	1/20	2/20	3/20	7	1.4	1.14
T 500 5	2-7	0/20	0/20	1/20	0/20	0/20	1	0.2	0.45
T 500 7	2-8	1/20	0/20	0/20	0/20	2/20	3	0.6	0.89
T 1000 3	2-9	0/20	1/20	0/20	0/20	0/20	1	0.2	0.45
T 1000 5	2-10	1/20	1/20	2/20	1/20	2/20	7	1.4	0.55
T 1000 1	2-11	1/20	1/20	1/20	2/20	1/20	6	1.2	0.45
T 1000 7	2-12	1/20	4/20	4/20	1/20	0/20	10	2.0	1.87
NT 250 1	2-13	0/20	3/20	2/20	0/20	0/20	5	1.0	1.41
NT 250 3	2-14	1/20	3/20	2/20	3/20	4/20	13	2.6	1.14
NT 250 5	2-15	4/20	0/20	2/20	6/20	9/20	21	4.2	3.49
NT 250 7	2-16	4/20	3/20	3/20	4/20	4/20	18	3.6	0.55
NT 500 1	2-17	1/20	2/20	0/20	2/20	2/20	7	1.4	0.89
NT 500 3	2-18	4/20	2/20	0/20	1/20	0/20	7	1.4	1.67
NT 500 5	2-19	2/20	3/20	3/20	1/20	3/20	12	2.4	0.89
NT 501 7	2-20	2/20	0/20	2/20	0/20	0/20	4	0.8	1.10
NT 1000 1	2-21	1/20	0/20	0/20	3/20	1/20	5	1.0	1.22
NT 1000 3	2-22	1/20	1/20	7/20	4/20	3/20	16	3.2	2.49
NT 1000 5	2-23	1/20	0/20	0/20	3/20	5/20	9	1.8	2.17
NT 1000 7	2-24	4/20	0/20	2/20	2/20	1/20	9	1.8	1.48
V 250 1	2-25	1/20	0/20	1/20	2/20	1/20	5	1.0	0.71
V 250 3	2-26	0/20	2/20	2/20	0/20	1/20	5	1.0	1.00
V 250 5	2-27	0/20	0/20	0/20	0/20	2/20	2	0.4	0.89
V 250 7	2-28	2/20	0/20	2/20	0/20	0/20	4	0.8	1.10
V 500 1	2-29	1/20	3/20	6/20	2/20	0/20	12	2.4	2.30
V 500 3	2-30	1/20	0/20	0/20	3/20	0/20	4	0.8	1.3
V 500 5	2-31	3/20	0/20	4/20	0/20	0/20	7	1.4	1.95
V 500 7	2-32	0/20	2/20	0/20	2/20	0/20	4	0.8	1.10
V 1000 1	2-33	0/20	4/20	1/20	0/20	0/20	5	1.0	1.73
V 1000 3	2-34	2/20	4/20	2/20	2/20	4/20	14	2.8	1.10
V 1000 5	2-35	2/20	0/20	2/20	0/20	0/20	4	0.8	1.10
V 1000 7	2-36	0/20	0/20	4/20	0/20	0/20	4	0.8	1.79
T 250 3 D	2-37	4/20	8/20	12/20	12/20	8/20	44	8.8	3.35

Table 3

Duplicate Sample Results for *Rhepoxynius abronius*

Client Sample ID	HITS ID	Mortality					Total	Mean of x	Stand. Dev.	Sig. Diff. Dup.
T 250 3	2-2	8/20	8/20	13/20	9/20	9/20	47	9.4	2.1	No
T 250 3	2-37	4/20	8/20	12/20	12/20	8/20	44	8.8	3.3	No

REFERENCES

Environment Canada. 1992. Biological Test Method: Acute Test for Sediment Toxicity Using Marine or Estuarine Amphipods. Report EPS 1/RM/26. Environment Canada, Environmental Protection, Ottawa, 1992.

Environment Canada. 1998. Reference Method for Determining Acute Lethality of Sediment to Marine or Estuarine Amphipods. Report EPS 1/RM/35. Environment Canada, Ottawa, Ontario. December, 1998.

APPENDIX D

NORTH TRIUMPH BENTHIC INFAUNAL SPECIES LIST - 2002

July 2002

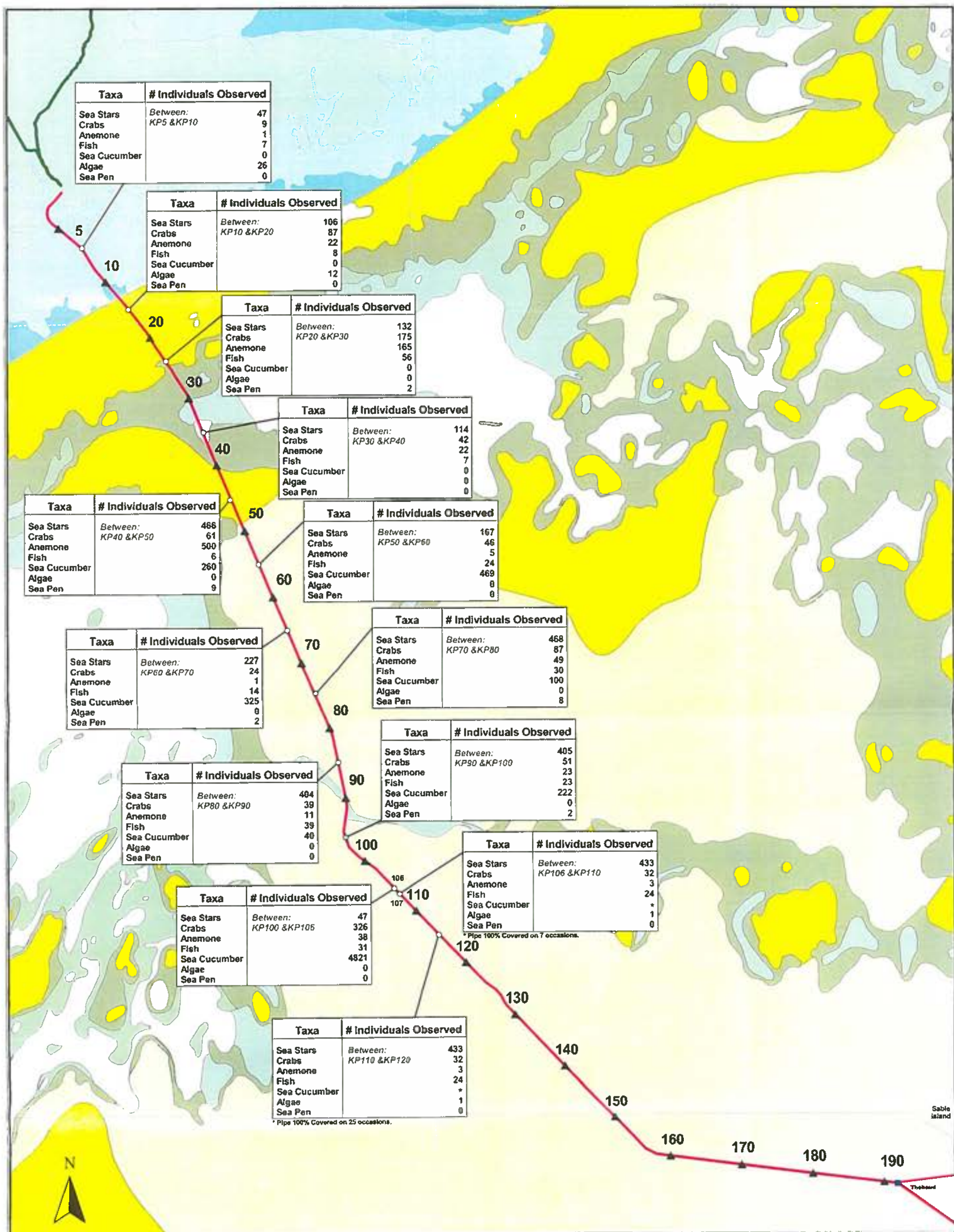
[illegible]

July 2002

Station	NT-250					NT-500					NT-1000					Total
	1	3	5	7	1	3	5	7	1	3	5	7	1	3	5	
Axes																
Species																
<i>Ophiura sarsi</i>		6	3	1			2		5							26
Class Crustacea																
Order Amphipoda																
<i>Ampelisca macrocephala</i>		4	4	1			3		1							17
<i>Ampelisca</i> sp.				1												1
<i>Anonyx sarsi</i>						1									1	2
<i>Corophium crassicornae</i>			3		2	1	7		6		1		8			28
<i>Leptochelirus pinguis</i>		1	1		2	1	3				2					10
<i>Pholis reinhardi</i> ?		1	1						1							3
<i>Priscillina armata</i>						1	1									2
<i>Rhachotropis oculata</i>								1								1
<i>Unciola irrorata</i>	1		2		1		5	1	1		2		1			14
<i>Caprella</i> sp.													1			1
Order Cumacea																
<i>Dialysis sculpta</i>		2	1		7	8	7						4			29
<i>Eudoreilopsis deformis</i>		1	1		2	2										6
<i>Lamprops fuscata</i>									1							1
Order Isopoda																
<i>Chiridotea tufsi</i>									1				1			1
<i>Synidotea nodulosa</i>																
Class Osteichthyes																
Order Perciformes																
<i>Anniodytes americanus</i>			2					13	1							16
Nematoda									1							2
Nemertean sp. A				1												1
Total	17	35	53	5	34	40	72	22	43	24	92					437

APPENDIX E

SPECIES LIST ALONG THE MAIN PIPELINE



Map Parameters

Projection: Universal Transverse Mercator (UTM)
 Zone: 20
 Datum: NAD 83
 Scale: 1:500,000
 Grid: Lat/Long 1°
 Project: NSD16737 - 700

October 2002

x:\projects\Nova Scotia\NSD16737\av_projects\NSD16737.apr

Figure 3

Dominant Organisms Observed On SOEP Pipeline



- Legend**
- ▲ KP's (10 kms)
 - M&NP Pipeline
 - SOEP Offshore Pipeline
- Surficial Geology**
- undifferentiated
 - more than 50% gravel
 - less than 50% gravel
 - La Have Clay
 - Sambro Sand
 - Emerald Silt
 - Drift
 - Sambro Sand bedrock

KP	Fauna	#	Fauna	#	Fauna	#
1.276	asterias	1				
1.29	asterias	1				
1.296	kelp	1				
1.308	asterias	1				
1.312	gadoid fish	1				
1.321	asterias	1				
1.332	asterias	1				
1.352	urchin	1				
1.356	asterias	1				
1.376	rock crab	1				
1.411	asterias	1				
1.415	rock crab	1				
1.417	asterias	1				
1.42	rock crab	1				
1.447	winter flounder	1				
1.456	asterias	1				
1.484	asterias	1				
1.488	asterias	1				
1.491	asterias	1				
1.531	kelp	1				
1.534	kelp	1				
1.538	asterias	1				
1.55	asterias	1				
1.564	rock crab	1				
1.567	rock crab	1				
1.57	asterias	1				
1.604	asterias	1				
1.741	kelp	1				
2.071	kelp	1				
2.286	algae	1				
2.391	asterias	1				
2.424	algae	1				
2.545	kelp	1				
2.555	bs	1				
2.564	kelp	1				
2.575	asterias	1				
2.604	northern red anemone	1				
2.611	gadoid fish	1				
3.457	algae	1				
3.468	asterias	1				
3.498	kelp	1				
3.543	kelp	1				
3.545	kelp	1				
4.1	kelp	1				
4.197	gadoid fish	1				
4.257	asterias	1				
4.381	rock crab	1				
4.633	kelp	1				
4.84	asterias	1				
4.914	asterias	1				
4.969	kelp	1				
4.9811	asterias	1				
5	asterias	1				
5.275	asterias	1				
5.41	urchin	1				
5.618	kelp	1	crab	1		
5.653	rock crab	1				
6.054	kelp	1				
6.172	kelp	1				
6.457	asterias	1				
6.998	asterias	1				
7.299	kelp	1				
7.933	northern red anemone	1	kelp	1		
8.032	northern red anemone	1				
8.075	rock crab	1				
8.094	algae	1				
8.107	asterias	1				
8.112	asterias	1				
8.12	asterias	1				
8.126	asterias	1				
8.136	asterias	1	kelp	1		
8.161	asterias	1				
8.279	asterias	1				
8.285	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
8.294	sunstar	1				
8.38	algae	1				
8.467	asterias	1				
8.494	asterias	1				
8.907	algae	1				
8.998	algae	1				
9.064	sunstar	1				
9.11	asterias	1	sunstar	1		
9.133	urchin	1				
9.16	flatfish	1				
9.235	rock crab	1				
9.276	gadoid fish	1				
9.285	flounder	1				
9.29	kelp	1				
9.45	snow crab	1				
9.499	algae	1				
9.746	asterias	1				
9.797	northern red anemone	1				
10.467	snow crab	1				
10.527	rock crab	1				
10.87	algae	1				
11.1	snow crab	1				
11.528	kelp	1	northern red anemone	1		
11.66	snow crab	1				
11.669	snow crab	1				
11.777	hake	1				
11.853	blood star	1				
12.203	snow crab	1				
12.377	flatfish	1				
12.45	northern red anemone	1				
12.512	northern red anemone	1				
12.604	snow crab	1				
12.682	blue asterias	1				
12.699	snow crab	1	northern red anemone	1		
12.876	snow crab	1				
12.985	snow crab	1				
13.034	rock crab	1				
13.193	rock crab	1				
13.261	snow crab	1				
13.293	algae	1				
13.33	snow crab	1				
13.341	snow crab	1				
13.355	snow crab	1	northern red anemone	1		
13.414	northern red anemone	1				
13.442	snow crab	1				
13.577	asterias	1				
13.667	asterias	1				
13.741	asterias	1				
13.81	asterias	1	sunstar	1		
13.83	asterias	1				
13.835	snow crab	1				
13.847	asterias	1				
13.861	snow crab	1				
13.968	rock crab	1				
13.971	rock crab	2				
13.974	asterias	1				
13.989	asterias	1				
14.036	asterias	1				
14.109	rock crab	1	asterias	1		
14.179	asterias	1				
14.203	asterias	1				
14.215	asterias	1				
14.311	snow crab	1				
14.323	rock crab	1				
14.327	rock crab	1				
14.351	white algae	1				
14.358	white algae	1				
14.384	white algae	1				
14.392	white algae	1				
14.402	asterias	1				
14.421	sunstar	1				
14.44	white algae	1				
14.481	snow crab	1	white algae	1		
14.494	snow crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
14.588	snow crab	1				
14.531	rock crab	1				
14.359	rock crab	1				
14.673	rock crab	1				
14.683	asterias	1				
14.688	asterias	1				
14.7	asterias	1				
14.768	crab	1				
14.786	snow crab	1				
14.791	white algae	1				
14.793	asterias	1				
14.798	northern red anemone	1				
14.802	asterias	1				
14.808	white algae	1				
14.815	white algae	1				
14.828	white algae	1	crab	1		
14.84	white algae	1	asterias	1		
14.854	rock crab	1				
14.904	blood star	1				
14.931	rock crab	1				
14.935	snow crab	1				
14.937	white algae	1				
14.942	asterias	1				
14.998	snow crab	1				
15.06	snow crab	1				
15.037	snow crab	1				
15.182	snow crab	1				
15.192	asterias	1				
15.203	rock crab	1				
15.214	asterias	1				
15.246	rock crab	1				
15.256	asterias	1				
15.261	snow crab	1				
15.3	asterias	1				
15.335	asterias	1				
15.367	rock crab	1				
15.386	rock crab	1				
15.41	sunstar	1				
15.441	snow crab	1				
15.458	snow crab	1				
15.568	snow crab	1				
15.579	asterias	1				
15.584	snow crab	1				
15.612	snow crab	1				
15.628	sunstar	1				
15.63	sunstar	1				
15.644	sunstar	1				
15.672	asterias	1				
15.681	sunstar	1				
15.686	snow crab	1	asterias	1		
15.689	asterias	1				
15.697	northern red anemone	1				
15.717	polar asterias	1				
15.722	snow crab	1				
15.741	blood star	1				
15.764	northern red anemone	1				
15.788	sculpin	1				
15.811	blood star	1				
15.814	blood star	1				
15.878	blood star	1				
15.88	sculpin	1				
15.901	blood star	1				
15.965	snow crab	1				
16.004	northern red anemone	1				
16.053	sculpin	1				
16.078	blue asterias	1				
16.128	blood star	1	northern red anemone	1		
16.132	blood star	1				
16.136	asterias	1				
16.146	sunstar	1				
16.156	snow crab	1				
16.192	crab	2				
16.208	northern red anemone	1				
16.228	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
16.235	sea pen	1				
16.286	sunstar	1				
16.232	sunstar	1				
16.347	gadoid fish	1				
16.35	asterias	1				
16.361	blood star	1				
16.373	northern red anemone	1				
16.376	northern red anemone	1				
16.396	northern red anemone	1				
16.408	crab	1				
16.434	snow crab	1				
16.447	sunstar	1				
16.491	sunstar	1				
16.536	snow crab	1				
16.539	northern red anemone	1				
16.568	blood star	1				
16.58	sculpin	1				
16.59	blood star	5				
16.607	sunstar	1				
16.612	snow crab	1				
16.616	asterias	5				
16.661	blood star	5				
16.696	northern red anemone	1				
16.699	northern red anemone	1				
16.747	snow crab	1				
16.75	blood star	5				
16.768	snow crab	1				
16.773	hydroid	1				
16.88	hydroid	1				
16.99	northern red anemone	1				
16.951	blood star	5				
16.962	sunstar	1				
16.982	spider crab	1				
17.023	spider crab	1				
17.037	spider crab	1				
17.057	sunstar	1				
17.071	asterias	1				
17.072	snow crab	1				
17.087	sunstar	1				
17.11	toad crab	1				
17.196	sunstar	1				
17.218	asterias	1				
17.234	sunstar	1				
17.261	asterias	1				
17.303	toad crab	1				
17.39	sunstar	1				
17.413	asterias	1				
17.435	toad crab	1				
17.47	toad crab	1				
17.5	asterias	1				
17.505	snow crab	1				
17.51	northern red anemone	1				
17.515	northern red anemone	1				
17.553	sunstar	1	asterias	1		
17.57	northern red anemone	1	toad crab	1		
17.572	sunstar	1				
17.641	asterias	1	northern red anemone	1		
17.709	sunstar	1				
17.712	spider crab	1				
17.716	asterias	1				
17.717	toad crab	1				
17.724	sunstar	1				
17.782	sunstar	1				
17.825	sunstar	1				
17.865	sunstar	1				
17.882	snow crab	1				
17.889	toad crab	1				
17.9	sunstar	1				
17.942	toad crab	1				
17.98	northern red anemone	1				
17.996	northern red anemone	1				
18.012	toad crab	1				
18.02	northern red anemone	1				
18.121	sea pen	1	crab	1		

KP	Fauna	#	Fauna	#	Fauna	#
18.167	sunstar	1				
18.195	sunstar	1				
18.267	sunstar	1				
18.369	rock crab	1				
18.375	sunstar	1				
18.38	hydroid	1				
18.398	crab	1				
18.4	sunstar	1				
18.418	sunstar	1				
18.441	snow crab	1				
18.468	snow crab	1				
18.489	asterias	1				
18.564	asterias	1				
18.572	rock crab	1				
18.603	snow crab	1				
18.762	sunstar	1				
18.77	rock crab	1				
18.831	asterias	1				
18.835	toad crab	1				
18.851	toad crab	1				
18.891	rock crab	1				
18.98	hydroid	1				
18.997	asterias	1				
19.029	asterias	1				
19.039	sunstar	1				
19.08	sculpin	1				
19.152	asterias	1				
19.266	hydroid	1				
19.368	hydroid	1				
19.396	sunstar	1				
19.441	toad crab	1				
19.461	sunstar	1				
19.544	sea cucumber	1				
19.614	toad crab	1				
19.653	asterias	1				
19.763	sunstar	1				
19.782	sculpin	1				
19.909	snow crab	1				
19.93	asterias	1				
19.945	sculpin	1				
19.964	snow crab	1				
19.969	sunstar	1				
19.976	spider crab	1				
19.999	snow crab	1				
20.001	hydroid	1				
20.073	toad crab	1				
20.123	sculpin	1	toad crab	1	sunstar	1
20.204	toad crab	1				
20.232	snow crab	1				
20.312	northern red anemone	1				
20.389	snow crab	1				
20.39	northern red anemone	1				
20.423	sunstar	1				
20.436	snow crab	1				
20.442	sculpin	1				
20.494	toad crab	1				
20.498	toad crab	1				
20.51	snow crab	1				
20.52	northern red anemone	1				
50.524	sculpin	1				
20.539	northern red anemone	1				
20.549	northern red anemone	1				
20.561	crab	1				
20.58	crab	1				
20.581	sculpin	1				
20.588	northern red anemone	1	sunstar	1		
20.592	toad crab	1				
20.603	sunstar	1				
20.624	northern red anemone	1				
20.626	northern red anemone	1				
20.714	northern red anemone	1				
20.715	toad crab	1				
20.759	toad crab	1				
20.774	sculpin	1				

KP	Fauna	#	Fauna	#	Fauna	#
20.777	sunstar	1				
20.785	toad crab	1				
20.787	snow crab	1				
20.788	rock crab	1				
20.828	basket star	1				
20.854	sunstar	1				
20.86	snow crab	1				
20.865	rock crab	1				
20.867	northern red anemone	1				
20.888	northern red anemone	1				
20.898	toad crab	1				
20.902	sculpin	1				
20.907	basket star	1				
20.916	crab	1				
20.925	basket star	1				
20.929	rock crab	1				
20.96	sculpin	1				
20.969	northern red anemone	1	rock crab	1		
20.975	sculpin	1				
20.977	basket star	1				
20.984	basket star	1	rock crab	1		
21.011	sculpin	1				
21.016	northern red anemone	1				
21.024	northern red anemone	1	basket star	1		
21.031	sunstar	1				
21.066	northern red anemone	1				
21.075	asterias	1				
21.077	basket star	1				
21.085	basket star	1				
21.093	northern red anemone	1				
21.096	northern red anemone	1	rock crab	1		
21.97	northern red anemone	1				
21.98	snow crab	1	basket star	1		
21.1	toad crab	1				
21.114	snow crab	1				
21.131	sculpin	1				
21.137	northern red anemone	1				
21.147	basket star	1				
21.156	northern red anemone	1				
21.171	toad crab	1				
21.193	basket star	1				
21.207	sculpin	1				
21.23	northern red anemone	1				
21.234	snow crab	1				
21.24	snow crab	1				
21.243	sculpin	1				
21.299	sculpin	1				
21.301	northern red anemone	1				
21.306	sunstar	1				
21.314	sunstar	1	sculpin	1		
21.321	sculpin	1				
21.326	northern red anemone	1				
21.327	toad crab	1				
21.339	snow crab	1				
21.348	northern red anemone	1				
21.359	northern red anemone	1				
21.361	sculpin	1				
21.37	basket star	1				
21.384	northern red anemone	1				
21.392	northern red anemone	1	basket star	1		
21.414	basket star	1				
21.427	northern red anemone	1				
21.428	sunstar	1				
21.43	northern red anemone	1				
21.434	northern red anemone	1				
21.438	snow crab	1				
21.444	sunstar	1				
21.46	sculpin	1				
21.463	snow crab	1				
21.473	sculpin	1				
21.482	sculpin	1	northern red anemone	1		
21.485	northern red anemone	1				
21.497	northern red anemone	1				
21.504	sculpin	1				

KP	Fauna	#	Fauna	#	Fauna	#
21.508	basket star	1				
21.51	toad crab	1				
21.515	toad crab	1				
21.524	northern red anemone	1				
21.529	basket star	1				
21.535	sculpin	1				
21.542	basket star	1				
21.549	northern red anemone	1				
21.554	crab	1				
21.557	northern red anemone	1				
21.581	sculpin	1				
21.582	northern red anemone	1				
21.583	basket star	1				
21.597	basket star	1				
21.609	northern red anemone	1				
21.62	northern red anemone	1				
21.622	northern red anemone	1				
21.63	northern red anemone	1				
21.632	sculpin	1				
21.638	northern red anemone	1				
21.639	sculpin	1				
21.64	basket star	1				
21.642	northern red anemone	1				
21.645	basket star	1				
21.647	northern red anemone	1				
21.663	northern red anemone	1				
21.672	northern red anemone	1				
21.683	northern red anemone	1				
21.689	basket star	1	northern red anemone	1		
21.694	northern red anemone	1				
21.697	northern red anemone	1				
21.7	basket star	1				
21.705	sculpin	1				
21.708	northern red anemone	1				
21.713	sunstar	1				
21.724	northern red anemone	1				
21.726	northern red anemone	1				
21.729	sculpin	1				
21.733	northern red anemone	1				
21.736	northern red anemone	1				
21.742	northern red anemone	1				
21.744	northern red anemone	1				
21.753	northern red anemone	1				
21.756	sunstar	1				
21.763	northern red anemone	1				
21.782	northern red anemone	1	snow crab	1		
21.791	northern red anemone	1				
21.803	northern red anemone	1				
21.809	crab	1				
21.847	northern red anemone	1				
21.853	northern red anemone	1				
21.856	northern red anemone	1				
21.858	sculpin	2				
21.86	northern red anemone	1				
21.861	basket star	1				
21.874	basket star	1				
21.877	basket star	1				
21.887	sculpin	1				
21.9	northern red anemone	1				
21.929	northern red anemone	1				
21.938	northern red anemone	1	basket star	1		
21.968	sculpin	1				
21.972	sculpin	1				
21.973	sculpin	1				
22.991	northern red anemone	3				
22.006	sculpin	1				
22.046	basket star	1				
22.056	basket star	1				
22.08	northern red anemone	1				
22.067	northern red anemone	1				
22.69	basket star	1				
22.7	northern red anemone	1				
22.74	sculpin	1				
22.75	basket star	1				

KP	Fauna	#	Fauna	#	Fauna	#
22.87	northern red anemone	1				
22.112	basket star	1				
22.115	northern red anemone	1				
22.165	northern red anemone	1				
22.168	northern red anemone	1				
22.171	northern red anemone	1				
22.174	northern red anemone	1				
22.178	sculpin	1				
22.194	northern red anemone	1				
22.224	sculpin	1				
22.252	northern red anemone	1				
22.28	basket star	1				
22.3	northern red anemone	1				
22.302	sea cucumber	1				
22.304	northern red anemone	1				
22.306	basket star	1				
22.323	sculpin	1				
22.341	northern red anemone	1				
22.403	snow crab	1				
22.422	sculpin	1	crab	1		
22.427	sculpin	1				
22.475	basket star	1				
22.49	sculpin	1				
22.537	sculpin	1				
22.559	snow crab	1				
22.563	spider crab	1				
22.596	basket star	1				
22.601	northern red anemone	1				
22.616	basket star	1				
22.636	sculpin	1				
22.687	sculpin	1				
22.688	northern red anemone	1				
22.693	sunstar	1				
22.698	basket star	1				
22.707	basket star	1				
22.715	sculpin	1				
22.726	snow crab	1				
22.732	basket star	1				
22.733	sculpin	1				
22.742	northern red anemone	1				
22.747	sculpin	1				
22.751	basket star	1				
22.76	sculpin	1				
22.763	spider crab	1				
22.777	sculpin	1				
22.78	snow crab	1				
22.8	sculpin	1				
22.809	snow crab	1				
22.825	basket star	1				
22.832	basket star	1				
22.863	snow crab	1				
22.872	snow crab	1				
22.89	sculpin	1				
22.891	sculpin	1				
22.907	sculpin	1				
22.916	basket star	1	crab	1		
22.929	northern red anemone	1				
22.957	snow crab	1	toad crab	1		
23.044	snow crab	1				
23.049	sculpin	1				
23.061	basket star	1				
23.074	basket star	1				
23.083	basket star	1				
23.006	basket star	1				
23.098	basket star	1				
23.104	basket star	1				
23.111	basket star	1				
23.116	basket star	1				
23.126	sculpin	1				
23.137	toad crab	1				
23.161	basket star	1				
23.169	basket star	1				
23.179	sculpin	1				
23.191	northern red anemone	1				

KP	Fauna	#	Fauna	#	Fauna	#
23.196	basket star	1				
23.209	northern red anemone	1				
23.219	toad crab	1				
23.22	northern red anemone	1				
23.229	northern red anemone	1				
23.231	northern red anemone	1				
23.234	basket star	1				
23.243	basket star	1				
23.253	snow crab	1				
23.26	basket star	1				
23.265	basket star	1				
23.274	basket star	1				
23.276	northern red anemone	1				
23.292	northern red anemone	1				
23.308	sea cucumber	1				
23.314	northern red anemone	1				
23.317	basket star	1				
23.32	basket star	1				
23.335	northern red anemone	1				
23.336	northern red anemone	1				
23.339	basket star	1				
23.348	northern red anemone	1				
23.35	basket star	1				
23.378	northern red anemone	1				
23.381	northern red anemone	1				
23.385	northern red anemone	1				
23.39	northern red anemone	1	basket star	1		
23.402	toad crab	1				
23.403	northern red anemone	1				
23.407	basket star	1				
23.417	toad crab	1				
23.419	northern red anemone	1	basket star	1		
23.427	northern red anemone	1				
23.429	basket star	1				
23.443	northern red anemone	1				
23.449	sunstar	1				
23.454	basket star	1				
23.457	northern red anemone	1				
23.462	northern red anemone	1				
23.467	basket star	1				
23.472	basket star	1				
23.48	basket star	1				
23.497	northern red anemone	1				
23.5	northern red anemone	1				
23.503	northern red anemone	1				
23.54	gadoid fish	1				
23.559	northern red anemone	1				
23.566	northern red anemone	1				
23.57	northern red anemone	1	basket star	1		
23.574	northern red anemone	1				
23.576	northern red anemone	1				
23.614	basket star	1				
23.618	snow crab	1				
23.627	basket star	1				
23.632	northern red anemone	1				
23.636	northern red anemone	1				
23.64	northern red anemone	1	toad crab	1		
23.642	northern red anemone	1				
23.645	basket star	1				
23.647	northern red anemone	1				
23.649	basket star	1				
23.664	basket star	1				
23.679	sea cucumber	1				
23.687	sea cucumber	1				
23.703	northern red anemone	1				
23.709	basket star	1				
23.715	sunstar	1				
23.734	toad crab	1				
23.737	northern red anemone	1	basket star	1		
23.74	northern red anemone	1				
23.755	sea cucumber	1				
23.781	northern red anemone	1				
23.799	sea cucumber	1				
23.808	basket star	1				

KP	Fauna	#	Fauna	#	Fauna	#
23.825	sunstar	1	snow crab	1		
23.854	northern red anemone	1				
23.873	basket star	1				
23.891	northern red anemone	1				
23.909	basket star	1				
23.922	basket star	1				
23.937	snow crab	1				
23.941	northern red anemone	1				
23.958	northern red anemone	1				
23.968	basket star	1				
23.974	northern red anemone	1				
23.985	toad crab	1				
23.998	sculpin	1				
24.001	northern red anemone	1				
24.032	basket star	1				
24.036	northern red anemone	1				
24.053	sculpin	1				
24.064	northern red anemone	1				
24.069	basket star	1				
24.077	northern red anemone	1				
24.144	northern red anemone	1				
24.151	northern red anemone	1				
24.167	northern red anemone	1				
24.169	toad crab	1				
24.193	basket star	1				
24.231	northern red anemone	1				
24.279	northern red anemone	1				
24.295	snow crab	1				
24.326	northern red anemone	1				
24.352	northern red anemone	1				
24.378	northern red anemone	1				
24.402	basket star	1				
24.419	sculpin	1				
24.455	spider crab	1				
24.463	basket star	1				
24.487	sunstar	1				
24.515	northern red anemone	1				
24.54	toad crab	1				
24.555	northern red anemone	1				
24.589	northern red anemone	1				
24.592	basket star	1				
24.615	basket star	1				
24.662	northern red anemone	1				
24.667	northern red anemone	1				
24.68	northern red anemone	1				
24.691	toad crab	1				
24.701	snow crab	1				
24.703	snow crab	1				
24.709	northern red anemone	1				
24.713	snow crab	1				
24.714	northern red anemone	1				
24.722	snow crab	1				
24.729	northern red anemone	1				
24.735	basket star	1				
24.764	sea cucumber	1				
24.795	northern red anemone	1				
24.797	gadoid	1				
24.82	northern red anemone	1				
24.857	basket star	1				
24.867	northern red anemone	1				
24.873	snow crab	1				
24.888	northern red anemone	1				
24.898	northern red anemone	1				
24.906	northern red anemone	1				
24.919	basket star	1				
24.923	toad crab	1				
24.926	sculpin	1				
24.936	redfish	1				
24.941	snow crab	1				
24.949	toad crab	1				
24.955	basket star	1				
24.964	toad crab	1				
24.991	toad crab	1				
25.002	sculpin	1				

KP	Fauna	#	Fauna	#	Fauna	#
25.008	toad crab	1				
25.039	northern red anemone	1				
25.041	basket star	1				
25.08	snow crab	1				
25.082	sunstar	1				
25.097	snow crab	1				
25.121	basket star	1				
25.141	basket star	1				
25.197	sculpin	1				
25.199	sea pen	1				
25.207	snow crab	1				
25.257	toad crab	1				
25.268	sculpin	1				
25.279	northern red anemone	1				
25.304	snow crab	1				
25.38	toad crab	1				
25.384	sculpin	1				
25.412	basket star	1				
25.482	spider crab	1				
25.495	toad crab	1				
25.509	toad crab	1				
25.584	toad crab	1				
25.635	snow crab	1				
25.69	sea pen	1				
25.738	basket star	1				
25.864	toad crab	1				
25.902	toad crab	1				
26.034	sea pen	1				
26.066	toad crab	1				
26.07	sea pen	1				
26.078	basket star	1				
26.15	toad crab	1				
26.152	basket star	1				
26.179	northern red anemone	1				
26.234	toad crab	1				
26.239	toad crab	1				
26.273	snow crab	1				
26.317	toad crab	1				
26.395	sunstar	1				
26.409	toad crab	1				
26.444	toad crab	1				
26.529	sunstar	1				
26.556	sunstar	1				
26.572	toad crab	1				
26.574	snow crab	1				
26.602	spider crab	1				
26.646	snow crab	1				
26.695	toad crab	1				
26.722	toad crab	1				
26.757	basket star	1				
26.768	snow crab	1				
26.846	toad crab	1				
26.855	basket star	1				
26.906	toad crab	1				
26.923	toad crab	1				
26.964	snow crab	1				
26.97	snow crab	3				
27.017	snow crab	1				
27.055	snow crab	1				
27.065	snow crab	1				
27.15	snow crab	1				
27.158	toad crab	1				
27.164	toad crab	1				
27.175	toad crab	2				
27.178	spider crab	1				
27.18	spider crab	1				
27.182	snow crab	1				
27.185	toad crab	2				
27.208	toad crab	1				
27.212	toad crab	1				
27.214	toad crab	1				
27.234	snow crab	1				
27.243	toad crab	1				
27.261	toad crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
27.275	northern red anemone	1				
27.276	toad crab	1				
27.307	sea cucumber	1				
27.32	toad crab	1				
27.322	sea cucumber	1				
27.334	toad crab	1				
27.351	northern red anemone	1				
27.357	toad crab	1				
27.39	toad crab	1				
27.398	toad crab	1				
27.4	toad crab	1				
27.533	sculpin	1				
27.536	toad crab	1				
27.552	snow crab	1				
27.819	snow crab	1				
27.864	basket star	1				
27.885	snow crab	1				
27.894	snow crab	1				
27.895	redfish	1				
27.941	redfish	2				
27.959	toad crab	1				
27.962	toad crab	3				
27.985	toad crab	1				
27.012	redfish	1				
27.026	toad crab	1				
27.064	basket star	1				
27.106	snow crab	1				
27.133	toad crab	1				
27.145	snow crab	1				
27.157	snow crab	1				
27.176	basket star	1				
27.199	basket star	1				
27.249	basket star	1				
27.259	basket star	1				
27.263	basket star	1				
27.406	toad crab	1				
27.444	toad crab	1				
27.446	toad crab	1				
27.451	toad crab	2				
27.457	toad crab	1				
28.61	northern red anemone	1				
28.63	northern red anemone	1				
28.643	basket star	1				
28.677	basket star	1				
28.68	redfish	1				
28.715	toad crab	1				
28.775	sunstar	1				
28.833	snow crab	1				
28.85	northern red anemone	1				
28.856	toad crab	1				
28.899	spidercrab	1				
28.911	snow crab	1				
29.082	basket star	1				
29.123	toad crab	1				
29.166	basket star	1				
29.208	snow crab	1				
29.231	basket star	1				
29.397	asterias	1				
29.42	sunstar	1				
29.482	snow crab	1				
29.489	basket star	2				
29.525	toad crab	1				
29.541	basket star	1				
29.564	toad crab	1				
29.604	basket star	1				
29.608	toad crab	1				
29.649	snow crab	1				
29.678	snow crab	1				
29.694	snow crab	1				
29.708	toad crab	1				
29.743	basket star	1				
29.744	snow crab	1				
29.795	northern red anemone	1				
29.808	spidercrab	1				

KP	Fauna	#	Fauna	#	Fauna	#
29.826	redfish	1				
29.862	redfish	1				
29.869	redfish	1				
29.872	redfish	1				
29.876	toad crab	2				
29.878	northern red anemone	1				
29.897	spidercrab	1				
29.928	snow crab	1				
29.953	toad crab	1				
29.973	basket star	1				
30.046	toad crab	1				
30.526	sunstar	1				
30.541	basket star	1				
30.703	snow crab	1				
30.71	snow crab	1				
30.739	snow crab	1				
30.826	redfish	1				
30.95	basket star	1				
31.123	asterias	1				
31.331	sunstar	1				
31.397	snow crab	1				
31.398	toad crab	1				
31.478	sunstar	1				
31.484	spidercrab	1				
31.503	toad crab	1				
31.595	asterias	1				
31.745	toad crab	1				
31.874	basket star	1				
31.976	toad crab	1				
32.007	sunstar	1				
32.072	snow crab	1				
32.164	basket star	1				
32.165	spidercrab	1				
32.217	asterias	1				
32.288	toad crab	1				
32.431	asterias	1				
32.609	spider crab	1				
32.727	asterias	1				
32.762	asterias	1				
32.834	basket star	1				
32.838	northern red anemone	1				
32.855	asterias	1				
32.898	snow crab	1				
32.984	asterias	1				
33.311	basket star	1				
33.377	basket star	1				
33.408	basket star	1				
33.541	nw	1				
33.568	basket star	1				
33.65	sunstar	1				
33.671	toad crab	1				
33.677	sunstar	1				
34.159	asterias	1				
34.173	toad crab	1				
34.187	toad crab	1				
34.22	toad crab	1				
34.58	asterias	1				
34.657	asterias	1				
34.673	wolffishfish	1				
34.852	snow crab	1				
34.905	sunstar	1				
35.162	asterias	1				
35.354	toad crab	1				
35.387	asterias	1				
35.395	toad crab	1				
35.434	asterias	1				
35.475	spidercrab	1				
35.48	spidercrab	1				
35.502	toad crab	1				
35.589	toad crab	1				
35.61	toad crab	1				
35.7	sunstar	1				
35.706	snow crab	1				
35.71	toad crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
35.718	toad crab	1				
35.732	toad crab	1				
35.772	snow crab	1				
35.783	asterias	1				
35.996	asterias	1				
36.094	sunstar	1				
36.109	snow crab	1				
36.308	asterias	1				
36.369	asterias	1				
36.382	asterias	1				
36.717	asterias	1				
36.73	asterias	1	asterias	1		
36.761	asterias	1				
36.864	asterias	1				
36.884	asterias	1				
36.939	asterias	1				
36.96	asterias	1				
36.974	toad crab	1				
37.005	sunstar	1				
37.16	snow crab	1				
37.317	snow crab	1				
37.364	asterias	1				
37.454	sunstar	1				
37.475	asterias	1				
37.49	asterias	1				
37.551	snow crab	1				
37.556	snow crab	1				
37.656	sunstar	1				
37.843	asterias	1				
37.884	asterias	1				
37.937	asterias	1				
37.941	sunstar	1				
38.023	asterias	1				
38.047	toad crab	1				
38.059	asterias	1				
38.07	asterias	2				
38.088	asterias	1				
38.161	asterias	1				
38.198	asterias	1				
38.218	asterias	1				
38.243	asterias	1				
38.26	northern red anemone	1	sunstar	1		
38.286	asterias	1				
38.308	asterias	1				
38.334	asterias	1				
38.354	asterias	1				
38.365	asterias	2				
38.384	sunstar	1				
38.417	asterias	1				
38.44	asterias	1	asterias	1		
38.473	asterias	1				
38.48	asterias	1				
38.482	asterias	1				
38.508	northern red anemone	1				
38.515	asterias	2				
38.569	asterias	1				
38.587	asterias	1				
38.589	asterias	1				
38.598	asterias	1				
38.673	asterias	1				
38.685	asterias	1				
38.727	asterias	1				
38.767	asterias	1				
38.778	asterias	1				
38.789	gadoid fish	1				
38.803	asterias	1	asterias	1		
38.837	asterias	1				
38.849	asterias	1				
38.95	asterias	1				
38.968	asterias	1				
39.036	northern red anemone	1				
39.057	northern red anemone	1				
39.06	winter flounder	1				
39.084	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
39.095	northern red anemone	1				
39.102	redfish	1				
39.206	asterias	1				
39.248	toad crab	1				
39.254	northern red anemone	1				
39.257	sunstar	1				
39.288	sunstar	1				
39.293	northern red anemone	1				
39.31	sunstar	1				
39.363	sunstar	1				
39.374	sunstar	1				
39.398	northern red anemone	1				
39.404	wolffishfish	1				
39.428	sunstar	1				
39.475	snow crab	1				
39.49	northern red anemone	1				
39.493	northern red anemone	1				
39.497	toad crab	1				
39.539	asterias	1				
39.565	northern red anemone	1				
39.575	sunstar	1				
39.582	northern red anemone	1				
39.604	asterias	1				
39.613	northern red anemone	1				
39.62	basket star	1				
39.663	asterias	1				
39.674	asterias	1				
39.735	northern red anemone	1				
39.748	asterias	1				
39.755	asterias	1				
39.757	asterias	1				
39.772	asterias	1				
39.779	asterias	1				
39.786	sunstar	1				
39.791	northern red anemone	1				
39.861	northern red anemone	1				
39.972	northern red anemone	1				
39.978	northern red anemone	1				
39.983	northern red anemone	1				
39.992	northern red anemone	2				
40.007	northern red anemone	1				
40.038	northern red anemone	1				
40.048	northern red anemone	2				
40.058	northern red anemone	1				
40.091	northern red anemone	2				
40.116	northern red anemone	1				
40.12	sunstar	1				
40.129	northern red anemone	1				
40.134	asterias	1				
40.157	northern red anemone	1				
40.168	northern red anemone	1				
40.179	asterias	1				
40.187	northern red anemone	1				
40.22	northern red anemone	1				
40.26	northern red anemone	1				
40.269	northern red anemone	1				
40.283	asterias	1				
40.314	northern red anemone	1				
40.326	northern red anemone	1				
40.394	northern red anemone	1				
40.415	northern red anemone	1				
40.435	northern red anemone	1	asterias	1		
40.473	northern red anemone	1				
40.498	northern red anemone	2				
40.512	northern red anemone	1				
40.543	northern red anemone	1				
40.549	northern red anemone	1				
40.593	northern red anemone	1				
40.608	northern red anemone	1				
40.621	northern red anemone	1				
40.649	northern red anemone	1				
40.714	northern red anemone	1				
40.721	asterias	1				
40.723	northern red anemone	1				

KP	Fauna	#	Fauna	#	Fauna	#
40.734	northern red anemone	1				
40.74	northern red anemone	1				
40.767	northern red anemone	1	asterias	1		
40.793	northern red anemone	2				
40.869	toad crab	1				
40.877	northern red anemone	1				
40.946	northern red anemone	1				
40.996	northern red anemone	1				
41.005	asterias	1				
41.021	northern red anemone	1				
41.061	northern red anemone	2				
41.121	northern red anemone	1				
41.197	asterias	1				
41.208	polar asteriasarfish asteriasar	1				
41.246	northern red anemone	1				
41.268	northern red anemone	1				
41.279	northern red anemone	1				
41.287	northern red anemone	1				
41.294	asterias	1				
41.301	basket star	1				
41.309	sunstar	1				
41.32	northern red anemone	1				
41.352	basket star	1				
41.369	northern red anemone	3				
41.384	northern red anemone	1				
41.387	asterias	1				
41.408	northern red anemone	2				
41.415	snow crab	1				
41.423	northern red anemone	1				
41.445	asterias	1				
41.457	snow crab	1				
41.46	asterias	1				
41.472	asterias	1				
41.483	asterias	1				
41.501	northern red anemone	1				
41.507	northern red anemone	1				
41.532	northern red anemone	1				
41.537	northern red anemone	1				
41.553	northern red anemone	1				
41.568	asterias	1				
41.57	basket star	1				
41.579	northern red anemone	1				
41.588	northern red anemone	1				
41.615	northern red anemone	1				
41.625	northern red anemone	1				
41.631	northern red anemone	1	basket star	1		
41.662	northern red anemone	1				
41.687	northern red anemone	1				
41.696	snow crab	1				
41.715	northern red anemone	1				
41.718	sunstar	1				
41.729	northern red anemone	1				
41.758	northern red anemone	1				
41.767	basket star	1				
41.787	basket star	1				
41.824	asterias	1				
41.842	basket star	2				
41.844	northern red anemone	1				
41.852	northern red anemone	1				
41.859	northern red anemone	1				
41.879	northern red anemone	1				
41.882	northern red anemone	1	asterias	1		
41.888	asterias	1				
41.901	sunstar	1				
41.914	northern red anemone	1				
41.932	northern red anemone	1				
41.937	northern red anemone	1				
41.971	northern red anemone	1				
41.987	northern red anemone	1				
41.992	northern red anemone	1				
41.995	northern red anemone	1				
42.035	northern red anemone	1				
42.038	asterias	1				
42.054	snow crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
42.062	asterias	1				
42.069	northern red anemone	1				
42.077	snow crab	1				
42.078	toad crab	1				
42.106	northern red anemone	1				
42.111	northern red anemone	1				
42.119	northern red anemone	1				
42.129	northern red anemone	1				
42.141	northern red anemone	1				
42.155	northern red anemone	1				
42.159	northern red anemone	1				
42.169	northern red anemone	2				
42.174	northern red anemone	2				
42.203	sunstar	1				
42.204	asterias	1				
42.208	toad crab	1	asterias	1		
42.212	northern red anemone	2				
42.216	northern red anemone	1				
42.221	asterias	1				
42.245	northern red anemone	1				
42.269	northern red anemone	1				
42.285	northern red anemone	1				
42.291	northern red anemone	1				
42.294	asterias	1				
42.297	asterias	1				
42.298	northern red anemone	1				
42.3	asterias	1				
42.32	northern red anemone	1				
42.33	asterias	1				
42.339	northern red anemone	1				
42.349	asterias	1				
42.356	asterias	1	northern red anemone	1		
42.375	asterias	1				
42.376	northern red anemone	1				
42.396	northern red anemone	1				
42.398	northern red anemone	1				
42.406	asterias	1	flounder	1		
42.434	northern red anemone	1	asterias	1		
42.454	asterias	1				
42.482	asterias	1	northern red anemone	1		
42.495	northern red anemone	1				
42.505	asterias	1				
42.509	asterias	1				
42.536	northern red anemone	1				
42.538	asterias	1				
42.549	northern red anemone	1				
42.556	asterias	1				
42.564	northern red anemone	1				
42.573	polar asterias	1				
42.59	northern red anemone	1				
42.596	northern red anemone	1				
42.617	asterias	2	northern red anemone	1		
42.622	asterias	1				
42.627	asterias	1				
42.641	asterias	1				
42.643	toad crab	1				
42.645	asterias	1				
42.653	asterias	1				
42.66	northern red anemone	1	snow crab	1		
42.708	asterias	1				
42.755	asterias	1	asterias	1		
42.757	northern red anemone	1				
42.768	northern red anemone	1				
42.783	asterias	1				
42.785	snow crab	1				
42.793	northern red anemone	1	asterias	1		
42.814	asterias	1				
42.833	asterias	1				
42.844	asterias	1				
42.859	northern red anemone	1				
42.862	asterias	1				
42.865	asterias	1				
42.886	northern red anemone	1				
42.896	snow crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
43.001	asterias	1				
43.05	asterias	1				
43.084	asterias	1				
43.136	northern red anemone	2				
43.143	asterias	1				
43.153	asterias	1				
43.18	asterias	1				
43.214	asterias	2				
43.229	asterias	1				
43.236	asterias	1				
43.271	sunstar	1				
43.303	asterias	1	northern red anemone	1		
43.336	asterias	1				
43.363	asterias	1				
43.37	asterias	1				
43.39	snow crab	1				
43.394	sunstar	1				
43.396	asterias	1				
43.409	asterias	1				
43.441	asterias	1				
43.475	northern red anemone	1				
43.482	asterias	1				
43.513	northern red anemone	1				
43.53	northern red anemone	1				
43.548	northern red anemone	1				
43.56	northern red anemone	1				
43.569	basket star	3				
43.629	asterias	1				
43.643	northern red anemone	1				
43.656	northern red anemone	1				
43.666	basket star	1				
43.686	asterias	1				
43.691	sunstar	1	polar star	1		
43.702	northern red anemone	1	asterias	1		
43.721	basket star	1				
43.729	asterias	1				
43.769	sunstar	1				
43.786	northern red anemone	1				
43.812	basket star	1				
43.826	asterias	1				
43.831	asterias	1				
43.841	asterias	3				
43.845	basket star	1				
43.863	basket star	1				
43.9	asterias	1	asterias	1		
43.908	basket star	1	northern red anemone	1		
43.923	basket star	1	northern red anemone	1		
43.939	northern red anemone	1				
43.947	basket star	1				
43.975	asterias	2				
43.982	basket star	1				
44.03	asterias	1				
44.036	northern red anemone	1				
44.047	asterias	1				
44.06	toad crab	1				
44.076	northern red anemone	1				
44.087	basket star	1				
44.092	basket star	1				
44.13	asterias	1				
44.135	basket star	1				
44.14	asterias	1	northern red anemone	1		
44.154	snow crab	1				
44.163	asterias	1				
44.171	asterias	1				
44.183	asterias	1				
44.23	asterias	1				
44.253	asterias	1				
44.294	northern red anemone	1				
44.319	northern red anemone	1				
44.333	northern red anemone	1				
44.337	sunstar	1				
44.348	northern red anemone	1				
44.352	basket star	1				
44.363	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
44.387	snow crab	1				
44.406	basket star	1				
44.416	asterias	1				
44.431	asterias	1				
44.457	asterias	1	basket star	1		
44.468	asterias	1				
44.488	northern red anemone	1				
44.497	northern red anemone	1				
44.511	basket star	1				
44.533	northern red anemone	1				
44.538	toad crab	1				
44.552	asterias	3				
44.572	snow crab	1				
44.613	sea cucumber	1				
44.62	asterias	1				
44.622	northern red anemone	1				
44.633	northern red anemone	1	asterias	1		
44.637	northern red anemone	1	asterias	1		
44.644	northern red anemone	1				
44.647	northern red anemone	1				
44.649	northern red anemone	1				
44.651	northern red anemone	1				
44.661	northern red anemone	1				
44.663	northern red anemone	1	asterias	1		
44.681	northern red anemone	1				
44.692	asterias	1				
44.751	asterias	2	northern red anemone	1		
44.772	northern red anemone	1				
44.782	northern red anemone	1				
44.79	northern red anemone	1				
44.792	asterias	1				
44.796	northern red anemone	1				
44.8	northern red anemone	1				
44.803	northern red anemone	1				
44.809	northern red anemone	1				
44.814	northern red anemone	1				
44.816	basket star	1				
44.826	sea cucumber	1				
44.854	basket star	1	asterias	1		
44.862	asterias	1				
44.876	northern red anemone	1				
44.878	basket star	1				
44.884	northern red anemone	1				
44.887	northern red anemone	1				
44.89	northern red anemone	1				
44.895	northern red anemone	2				
44.903	northern red anemone	1				
44.902	northern red anemone	1	asterias	1	basket star	1
44.932	northern red anemone	1				
44.939	northern red anemone	1				
44.94	basket star	1				
44.953	northern red anemone	1				
44.963	northern red anemone	1				
44.964	northern red anemone	1				
44.989	northern red anemone	1				
44.993	northern red anemone	1				
44.995	northern red anemone	1				
44.997	northern red anemone	2				
45.001	toad crab	1	northern red anemone	1	basket star	1
45.007	northern red anemone	1				
45.013	northern red anemone	2				
45.022	northern red anemone	1	basket star	1		
45.034	asterias	1				
45.036	northern red anemone	1				
45.047	asterias	1				
45.05	northern red anemone	1				
45.056	northern red anemone	2				
45.06	northern red anemone	2				
45.07	northern red anemone	1				
45.074	northern red anemone	1				
45.077	northern red anemone	1				
45.079	sea pen	1	northern red anemone	1		
45.084	snow crab	1				
45.085	basket star	1				

KP	Fauna	#	Fauna	#	Fauna	#
45.095	basket star	1				
45.101	northern red anemone	1				
45.105	northern red anemone	2				
45.108	basket star	1				
45.11	sea pen	1				
45.112	asterias	1	northern red anemone	1		
45.124	northern red anemone	1				
45.127	basket star	1				
45.13	northern red anemone	1				
45.134	northern red anemone	1				
45.136	northern red anemone	1	basket star	1		
45.142	northern red anemone	2				
45.148	asterias	1	northern red anemone	1		
45.154	asterias	1				
45.16	sunstar	1				
45.162	snow crab	1				
45.162	northern red anemone	1				
45.165	sea pen	1				
45.168	northern red anemone	1				
45.177	northern red anemone	1				
45.184	basket star	1				
45.186	sea cucumber	1				
45.189	basket star	1				
45.197	northern red anemone	1				
45.198	basket star	1				
45.221	northern red anemone	2				
45.225	northern red anemone	3				
45.227	northern red anemone	1				
45.23	northern red anemone	1				
45.232	basket star	1				
45.24	basket star	2				
45.245	northern red anemone	1				
45.249	northern red anemone	1				
45.25	northern red anemone	2				
45.251	northern red anemone	1				
45.255	northern red anemone	1				
45.259	northern red anemone	3				
45.265	northern red anemone	2	sea cucumber	1		
45.274	northern red anemone	1	asterias	1		
45.282	basket star	1				
45.285	basket star	1	asterias	1		
45.292	northern red anemone	2				
45.297	northern red anemone	1				
45.3	basket star	1				
45.308	sea cucumber	1				
45.314	northern red anemone	1				
45.318	northern red anemone	1	basket star	1	sea cucumber	1
45.322	basket star	1				
45.327	sea cucumber	1				
45.332	northern red anemone	1				
45.339	northern red anemone	1	asterias	1		
45.342	basket star	1				
45.353	basket star	1				
45.355	basket star	1				
45.359	northern red anemone	3				
45.368	asterias	1	northern red anemone	1	basket star	1
45.374	northern red anemone	4				
45.379	basket star	1				
45.392	basket star	1	northern red anemone	1		
45.404	basket star	1				
45.406	northern red anemone	2				
45.411	northern red anemone	1				
45.413	northern red anemone	4	basket star	2	sea pen	1
45.423	northern red anemone	1	basket star	1		
45.429	northern red anemone	1				
45.431	northern red anemone	1				
45.436	basket star	1				
45.438	basket star	1	northern red anemone	4		
45.445	northern red anemone	3				
45.449	northern red anemone	1				
45.451	northern red anemone	2	basket star	1		
45.454	sea pen	1				
45.458	asterias	1	northern red anemone	1	basket star	1
45.466	northern red anemone	1	basket star	1		

KP	Fauna	#	Fauna	#	Fauna	#
45.469	northern red anemone	1				
45.472	northern red anemone	1				
45.477	northern red anemone	1	sunstar	1		
45.481	basket star	1				
45.491	basket star	2				
45.493	northern red anemone	4				
45.497	northern red anemone	3	basket star	1		
45.5	northern red anemone	3				
45.502	northern red anemone	3	basket star	2		
45.512	northern red anemone	1				
45.52	northern red anemone	1	sunstar	1		
45.528	basket star	1				
45.544	northern red anemone	4	basket star	2		
45.555	northern red anemone	1	basket star	1	asterias	1
45.56	northern red anemone	1	basket star	1		
45.565	northern red anemone	2	sunstar	1		
45.568	northern red anemone	1	sunstar	1		
45.57	northern red anemone	1	sunstar	1		
45.578	northern red anemone	1				
45.579	basket star	1				
45.585	northern red anemone	2				
45.58	sea pen	1	northern red anemone	1	basket star	1
45.592	basket star	3				
45.595	northern red anemone	3	sea cucumber	1		
45.6	basket star	2				
45.603	northern red anemone	2				
45.609	basket star	1				
45.611	sea cucumber	1				
45.616	northern red anemone	1	basket star	1		
45.619	sunstar	1	basket star	2		
45.621	northern red anemone	3				
45.627	northern red anemone	1	basket star	3		
45.631	northern red anemone	1	basket star	5		
45.635	northern red anemone	1	basket star	4		
45.639	basket star	2	asterias	1		
45.646	northern red anemone	1				
45.654	basket star	1				
45.667	basket star	3				
45.669	northern red anemone	1				
45.671	basket star	4	sea cucumber	1		
45.677	northern red anemone	1				
45.679	northern red anemone	6				
45.682	northern red anemone	2	basket star	2		
45.688	northern red anemone	4	basket star	2		
45.693	basket star	4	northern red anemone	1	sea cucumber	1
45.697	northern red anemone	2				
45.699	sea pen	1				
45.703	northern red anemone	2	basket star	1		
45.704	northern red anemone	4				
45.709	northern red anemone	3				
45.711	basket star	2				
45.713	basket star	1	sea cucumber	1		
45.715	northern red anemone	2				
45.72	asterias	1				
45.721	northern red anemone	2				
45.733	sea pen	1				
45.734	asterias	1	basket star	2		
45.742	asterias	1	basket star	1	northern red anemone	1
45.745	northern red anemone	3				
45.749	northern red anemone	2	basket star	2		
45.75	sea cucumber	1				
45.751	northern red anemone	1				
45.755	northern red anemone	1				
45.756	northern red anemone	3				
45.758	northern red anemone	3	basket star	2		
45.76	northern red anemone	2				
45.763	northern red anemone	2				
45.767	northern red anemone	2				
45.772	basket star	1	northern red anemone	1	sea cucumber	1
45.78	basket star	1	northern red anemone	3		
45.782	basket star	1	northern red anemone	1	sea cucumber	1
45.788	basket star	1	asterias	1		
45.792	northern red anemone	1				
45.794	basket star	3	northern red anemone	1		

KP	Fauna	#	Fauna	#	Fauna	#
45.8	northern red anemone	2				
45.804	basket star	4	sea pen	1		
45.809	basket star	3				
45.816	basket star	3				
45.819	basket star	5				
45.826	basket star	1				
45.829	basket star	1	asterias	1		
45.831	sea cucumber	1				
45.833	basket star	4				
45.836	basket star	3				
45.84	sea cucumber	1				
45.846	basket star	3				
45.856	northern red anemone	3				
45.857	asterias	1	basket star	1		
45.864	northern red anemone	1	basket star	1		
45.871	northern red anemone	1	basket star	1		
45.872	sea cucumber	1				
45.883	northern red anemone	1				
45.887	northern red anemone	3				
45.896	basket star	4				
45.899	basket star	2	asterias	1		
45.906	basket star	1				
45.91	northern red anemone	1				
45.912	northern red anemone	1				
45.914	asterias	1	basket star	1		
45.916	sea cucumber	1				
45.92	sea cucumber	1				
45.924	northern red anemone	1	basket star	1		
45.926	northern red anemone	4	basket star	2	asterias	1
45.936	northern red anemone	1	basket star	1		
45.94	northern red anemone	1	basket star	1		
45.943	northern red anemone	1	basket star	1		
45.945	northern red anemone	1				
45.957	northern red anemone	1	basket star	1		
45.959	northern red anemone	1				
45.963	northern red anemone	1				
45.966	northern red anemone	1	basket star	1		
45.969	northern red anemone	1				
45.971	basket star	1				
45.973	basket star	1	northern red anemone	1		
45.978	basket star	2				
45.981	northern red anemone	2				
45.986	basket star	2				
45.99	northern red anemone	1				
45.998	northern red anemone	1	basket star	1	asterias	1
46.01	northern red anemone	2				
46.012	basket star	4				
46.016	basket star	2				
46.019	basket star	1				
46.023	northern red anemone	2				
46.025	northern red anemone	1	asterias	1		
46.029	sea cucumber	1				
46.03	basket star	1				
46.033	basket star	1	asterias	1		
46.037	asterias	1				
46.041	basket star	1				
46.042	basket star	1	asterias	1		
46.047	basket star	1	northern red anemone	1		
46.054	basket star	2	northern red anemone	1	asterias	1
46.057	northern red anemone	1				
46.062	basket star	1				
46.066	basket star	1	sea cucumber	1		
46.07	basket star	1				
46.072	sea cucumber	1				
46.077	basket star	1				
46.08	basket star	1				
46.084	basket star	1	asterias	1		
46.086	northern red anemone	1				
46.09	basket star	1				
46.092	northern red anemone	1				
46.099	asterias	1				
46.104	sea cucumber	1	northern red anemone	1	basket star	1
46.105	northern red anemone	3	sea cucumber	1		
46.11	toad crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
46.111	northern red anemone	1	basket star	1		
46.131	northern red anemone	1	basket star	3		
46.144	northern red anemone	1	asterias	1		
46.15	northern red anemone	5	basket star	3		
46.157	northern red anemone	3				
46.167	northern red anemone	1				
46.176	northern red anemone	3				
46.18	northern red anemone	2	sea cucumber	1		
46.186	northern red anemone	4				
46.193	northern red anemone	1				
46.169	northern red anemone	3				
46.198	basket star	1				
46.201	basket star	3				
46.207	basket star	1				
46.215	basket star	2	northern red anemone	4		
46.219	northern red anemone	2				
46.221	northern red anemone	3				
46.222	basket star	3	sea cucumber	1		
46.228	northern red anemone	1				
46.232	basket star	3				
46.238	basket star	2				
46.244	northern red anemone	1	sea cucumber	1		
46.246	asterias	1				
46.25	basket star	1				
46.254	northern red anemone	1	sea cucumber	1		
46.262	northern red anemone	4	basket star	1		
46.267	northern red anemone	1				
46.27	northern red anemone	1				
46.275	basket star	1				
46.278	basket star	1				
46.283	northern red anemone	1				
46.289	northern red anemone	1	basket star	3		
46.291	asterias	1				
46.301	basket star	2				
46.308	basket star	1	asterias	1		
46.313	asterias	1				
46.314	basket star	1				
46.327	asterias	1				
46.329	basket star	3				
46.332	asterias	1				
46.34	northern red anemone	1				
46.341	northern red anemone	1				
46.343	northern red anemone	1				
46.345	basket star	1				
46.346	northern red anemone	1				
46.348	northern red anemone	1				
46.356	basket star	1				
46.363	basket star	1	asterias	1		
46.368	northern red anemone	1	sunstar	1		
46.375	northern red anemone	1				
46.375	asterias	1				
46.378	northern red anemone	1				
46.383	northern red anemone	1				
46.386	northern red anemone	1				
46.395	northern red anemone	1				
46.398	northern red anemone	1				
46.403	basket star	1				
46.407	northern red anemone	1				
46.409	northern red anemone	1				
46.41	basket star	1				
46.412	asterias	1				
46.414	basket star	1				
46.415	basket star	1				
46.434	northern red anemone	1				
46.443	northern red anemone	1				
46.448	northern red anemone	1				
46.471	basket star	2				
46.476	asterias	1	sunstar	1	northern red anemone	1
46.484	northern red anemone	1	basket star	2		
46.488	northern red anemone	1				
46.494	snow crab	2				
46.499	snow crab	1				
46.508	basket star	1				
46.52	basket star	1				

KP	Fauna	#	Fauna	#	Fauna	#
46.521	snow crab	1				
46.523	asterias	1				
46.528	snow crab	1	gadoid	1		
46.53	asterias	1				
46.533	snow crab	1				
46.538	snow crab	1				
46.541	snow crab	1				
46.556	snow crab	1				
46.558	snow crab	1				
46.579	asterias	1				
46.585	snow crab	1				
46.596	toad crab carb	1				
46.602	redfish	1				
46.611	snow crab	2				
46.612	snow crab	2				
46.62	snow crab	1				
46.625	asterias	1				
46.646	snow crab	1				
46.654	asterias	1				
46.663	northern red anemone	1				
46.676	sunstar	1				
46.683	asterias	1				
46.71	asterias	1				
46.717	asterias	1				
46.722	snow crab	1	northern red anemone	1		
46.729	asterias	1	toad crab	1		
46.731	asterias	1				
46.736	sunstar	1				
46.743	northern red anemone	1				
46.758	northern red anemone	1				
46.771	asterias	1				
46.804	northern red anemone	1				
46.841	asterias	1				
46.823	asterias	1				
46.824	sunstar	1				
46.828	asterias	1				
46.837	asterias	1				
46.848	asterias	1				
46.841	northern red anemone	1				
46.844	asterias	1				
46.845	asterias	1				
46.848	asterias	1				
46.855	northern red anemone	1				
46.865	sunstar	1	asterias	1		
46.891	snow crab	1				
46.919	sunstar	1				
46.948	asterias	1				
46.953	asterias	1				
46.996	snow crab	1				
47.005	northern red anemone	1				
47.015	northern red anemone	1				
47.029	snow crab	1				
47.037	asterias	1				
47.043	asterias	1				
47.051	basket star	1				
47.066	northern red anemone	1	sea pen	1		
47.077	toad crab carb	1				
47.103	asterias	1				
47.106	basket star	1				
47.113	sunstar	1				
47.126	sunstar	1				
47.148	basket star	1				
47.148	asterias	1				
47.192	sea cucumber	1				
47.192	basket star	2				
47.201	basket star	1				
47.23	basket star	1	asterias	1		
47.279	northern red anemone	1				
47.307	asterias	1				
47.311	asterias	1				
47.317	toad crab carb	1				
47.32	asterias	1				
47.327	toad crab carb	1				
47.333	sea cucumber	2				

KP	Fauna	#	Fauna	#	Fauna	#
47.39	asterias	1				
47.408	sea cucumber	1				
47.43	asterias	1				
47.433	sunstar	1				
47.446	asterias	1				
47.468	basket star	1				
47.506	northern red anemone	1				
47.508	sea cucumber	1				
47.509	northern red anemone	1	sea cucumber	1		
47.522	sea cucumber	1	asterias	1		
47.533	sea cucumber	1				
47.543	sea cucumber	1				
47.546	sunstar	1				
47.562	asterias	1				
47.568	sea cucumber	1				
47.62	sunstar	1				
47.676	basket star	1				
47.685	asterias	1				
47.711	asterias	1				
47.723	sea cucumber	2				
47.765	asterias	1				
47.808	sea cucumber	1				
47.849	sea cucumber	1				
47.859	asterias	1				
47.906	asterias	1				
47.916	toad crab carb	1				
47.924	sculpin	1				
47.928	asterias	1				
47.934	sea cucumber	1				
47.944	asterias	1				
47.945	sea cucumber	1				
47.953	snow crab	1				
47.961	sea cucumber	1				
47.979	asterias	1				
47.989	sea cucumber	1				
47.996	asterias	1				
48.019	northern red anemone	1				
48.05	sea cucumber	1				
48.061	asterias	1				
48.068	sea cucumber	1				
48.096	asterias	2				
48.099	sea cucumber	2				
48.108	sea cucumber	1				
48.119	asterias	1				
48.124	sunstar	1				
48.139	sea cucumber	1				
48.159	snow crab	1				
48.162	sea cucumber	1				
48.173	asterias	1				
48.191	sea cucumber	1				
48.193	sea cucumber	1				
48.216	sea cucumber	1				
48.218	sea cucumber	1				
48.221	sea cucumber	1				
48.243	sea cucumber	1				
48.249	sea cucumber	1				
48.251	snow crab	1				
48.261	sea cucumber	1				
48.273	asterias	1				
48.278	sea cucumber	1				
48.281	sea cucumber	1				
48.284	sea cucumber	1				
48.3	sea cucumber	1				
48.311	sea cucumber	1				
48.317	sea cucumber	1				
48.345	sea cucumber	1				
48.352	sea cucumber	1				
48.36	sea cucumber	2				
48.375	sea cucumber	1				
48.382	sea cucumber	1				
48.385	asterias	1				
48.415	asterias	1				
48.423	sea cucumber	1				
48.43	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
48.453	snow crab	2	sea cucumber	2		
48.467	basket star	1				
48.505	asterias	1				
48.528	sea cucumber	1				
48.537	sea cucumber	1				
48.594	asterias	1				
48.602	sculpin	1				
48.606	sea cucumber	1				
48.62	asterias	1				
48.631	asterias	1				
48.636	basket star	1	sea cucumber	1		
48.64	asterias	1				
48.645	sea cucumber	1				
48.658	sunstar	1				
48.661	snow crab	1				
48.666	sea cucumber	1				
48.688	sea cucumber	2				
48.702	sea cucumber	1				
48.706	asterias	1				
48.707	sea cucumber	1				
48.73	snow crab	1				
48.78	asterias	1	sea cucumber	1		
48.786	asterias	1				
48.794	sea pen	1				
48.796	sea cucumber	2				
48.802	sea cucumber	1				
48.813	sea cucumber	1				
48.831	sea cucumber	1				
48.836	sea cucumber	1				
48.85	asterias	1				
48.883	sea cucumber	2				
48.896	asterias	1				
48.903	snow crab	1				
48.926	asterias	1				
48.937	sea cucumber	1				
48.939	sea cucumber	2				
48.942	sea cucumber	1				
48.95	asterias	1				
48.969	sea cucumber	2				
48.978	sea cucumber	1				
48.981	sea cucumber	1				
48.989	sea cucumber	1				
49.004	sea cucumber	3				
49.013	sea cucumber	1				
49.019	sea cucumber	1				
49.028	sea cucumber	1				
49.033	sea cucumber	3				
49.044	sea cucumber	2				
49.046	sea cucumber	2				
49.063	sea cucumber	1				
49.065	sea cucumber	1				
49.068	sea cucumber	1				
49.078	sea cucumber	3				
49.083	sea cucumber	1				
49.089	sea cucumber	2				
49.094	sea cucumber	1				
49.098	sea cucumber	1				
49.103	sea cucumber	2				
49.106	sea cucumber	1				
49.108	sea cucumber	1				
49.112	northern red anemone	1				
49.117	sea cucumber	1				
49.131	sea cucumber	1				
49.134	sea cucumber	1				
49.15	sea cucumber	1				
49.159	sea cucumber	1				
49.163	sea cucumber	1				
49.166	sea cucumber	1				
49.173	sea cucumber	1				
49.189	sea cucumber	1				
49.196	sea cucumber	1				
49.211	sunstar	1				
49.214	polar star	1	sea cucumber	1		
49.222	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
49.226	sea cucumber	1				
49.234	sea cucumber	1				
49.241	sea cucumber	2				
49.26	sea cucumber	1				
49.271	sea cucumber	1				
49.282	sea cucumber	1				
49.291	sea cucumber	1				
49.299	sea cucumber	1				
49.301	sea cucumber	1				
49.307	sea cucumber	1				
49.309	sea cucumber	4				
49.318	sea cucumber	1				
49.327	sea cucumber	3	asterias	1		
49.338	sea cucumber	2				
49.35	sea cucumber	1				
49.358	sea cucumber	3				
49.363	sea cucumber	4				
49.365	sea cucumber	5				
49.374	sea cucumber	5				
49.38	sea cucumber	3				
49.384	sea cucumber	1				
49.394	sea cucumber	1				
49.398	snow crab	1				
49.423	sea cucumber	1				
49.43	sea cucumber	1				
49.437	sea cucumber	3				
49.442	snow crab	1				
49.448	sea cucumber	1				
49.451	sea cucumber	1				
49.453	sea cucumber	1				
49.455	asterias	1				
49.458	sea cucumber	1				
49.473	sea cucumber	1				
49.48	sea cucumber	1				
49.495	sea cucumber	1				
49.503	sea cucumber	3				
49.508	sea cucumber	1				
49.51	sea cucumber	1				
49.52	sea cucumber	2				
49.527	sea cucumber	3				
49.54	sea cucumber	2				
49.543	sea cucumber	2				
49.547	sea cucumber	1				
49.562	sea cucumber	3				
49.574	sea cucumber	1				
49.587	sea cucumber	1	snow crab	1		
49.6	sea cucumber	2				
49.602	sea cucumber	1				
49.608	sea cucumber	1				
49.617	sea cucumber	1				
49.623	sea cucumber	1				
49.639	sea cucumber	2				
49.649	sea cucumber	1				
49.652	sea cucumber	1				
49.66	sea cucumber	2				
49.672	sea cucumber	1				
49.678	sea cucumber	2				
49.69	sea cucumber	1				
49.694	sea cucumber	1				
49.707	sea cucumber	1				
49.715	sea cucumber	2				
49.723	sea cucumber	1				
49.735	sea cucumber	1				
49.738	sea cucumber	1				
49.752	sea cucumber	2				
49.76	sea cucumber	1				
49.778	sea cucumber	1				
49.805	sea cucumber	3				
49.813	sea cucumber	1				
49.816	sea cucumber	2				
49.82	sea cucumber	1				
49.841	sea cucumber	2	snow crab	1		
49.845	sea cucumber	1				
49.865	sea cucumber	3				

KP	Fauna	#	Fauna	#	Fauna	#
49.88	sea cucumber	1				
49.895	sea cucumber	1				
49.912	sea cucumber	1				
49.923	sea cucumber	1				
49.925	sea cucumber	1				
49.935	sea cucumber	1				
49.947	snow crab	1				
49.95	sea cucumber	1				
49.953	sea cucumber	1				
49.961	snow crab	1				
49.975	sea cucumber	1				
49.983	sea cucumber	2				
49.994	sea cucumber	1				
50.001	sea cucumber	1				
50.001	sea cucumber	1				
50.015	sea cucumber	1	asterias	1		
50.019	sea cucumber	1				
50.021	sea cucumber	1				
50.037	sea cucumber	1				
50.041	sea cucumber	1				
50.043	sea cucumber	1				
50.044	sea cucumber	1				
50.05	sea cucumber	1				
50.059	sea cucumber	1				
50.079	sea cucumber	1				
50.089	sea cucumber	1				
50.091	sea cucumber	1				
50.114	sea cucumber	2				
50.129	sea cucumber	3				
50.14	sea cucumber	1				
50.146	sea cucumber	1				
50.152	sea cucumber	3				
50.155	sea cucumber	1				
50.158	sea cucumber	1				
50.158	sea cucumber	1				
50.164	sea cucumber	1				
50.179	sunstar	1				
50.186	sea cucumber	1				
50.196	sea cucumber	2	asterias	1		
50.204	sea cucumber	2				
50.205	snow crab	1				
50.213	sea cucumber	1				
50.235	sea cucumber	1				
50.248	sea cucumber	1				
50.249	sea cucumber	1	sunstar	1		
50.252	sunstar	1				
50.272	sea cucumber	1				
50.282	sea cucumber	2				
50.294	sea cucumber	1				
50.302	sea cucumber	2	asterias	1		
50.314	sea cucumber	1				
50.316	sea cucumber	1				
50.322	sea cucumber	2				
50.325	asterias	1				
50.333	sea cucumber	2				
50.337	snow crab	1				
50.348	sea cucumber	2				
50.36	sea cucumber	1				
50.362	sea cucumber	1				
50.364	sea cucumber	1				
50.374	sea cucumber	2				
50.399	sea cucumber	1				
50.403	sea cucumber	1				
50.408	winter flounder	1				
50.415	sea cucumber	1				
50.457	sea cucumber	1	asterias	1		
50.48	sea cucumber	2				
50.495	sea cucumber	1				
50.501	asterias	3				
50.503	sea cucumber	1				
50.504	asterias	1	sea cucumber	1		
50.518	asterias	1				
50.522	sea cucumber	1				
50.537	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
50.543	sea cucumber	2				
50.554	sea cucumber	4				
50.565	sea cucumber	1				
50.569	sea cucumber	2				
50.572	sea cucumber	2				
50.574	sea cucumber	1				
50.582	snow crab	1				
50.607	sea cucumber	1	asterias	1		
50.62	asterias	1				
50.63	sea cucumber	1				
50.633	sea cucumber	1				
50.644	sea cucumber	4				
50.653	sea cucumber	1				
50.661	sea cucumber	1				
50.665	sea cucumber	1				
50.674	sea cucumber	1				
50.712	sea cucumber	1				
50.723	sea cucumber	1				
50.727	sea cucumber	1				
50.751	sea cucumber	1				
50.762	sea cucumber	1				
50.769	sea cucumber	1				
50.788	sea cucumber	1				
50.789	snow crab	1				
50.802	sea cucumber	1				
50.814	asterias	1				
50.821	snow crab	1				
50.827	sea cucumber	1				
50.841	asterias	1				
50.848	snow crab	1				
50.86	sea cucumber	1				
50.864	sea cucumber	1				
50.872	sea cucumber	3				
50.879	sea cucumber	1				
50.883	snow crab	1				
50.897	snow crab	1	sea cucumber	1		
50.92	sea cucumber	1				
50.926	polar sea star	1	asterias	1		
50.928	asterias	1				
50.936	sea cucumber	1				
50.955	sea cucumber	1				
50.964	asterias	1				
50.977	asterias	1				
50.984	sea cucumber	1				
50.99	sea cucumber	1				
50.992	sea cucumber	1				
50.998	sea cucumber	1	snow crab	1		
51.025	sea cucumber	1				
51.048	sea cucumber	1				
51.061	sea cucumber	2				
51.081	snow crab	1				
51.091	sea cucumber	1				
51.094	sea cucumber	1				
51.107	sea cucumber	1				
51.117	sea cucumber	2				
51.119	sea cucumber	1				
51.121	sea cucumber	1				
51.126	snow crab	1				
51.127	asterias	1				
51.141	sea cucumber	1				
51.143	sea cucumber	1				
51.165	sea cucumber	4				
51.168	asterias	3				
51.183	sea cucumber	1				
51.199	sea cucumber	1				
51.214	sea cucumber	2				
51.216	sea cucumber	1				
51.218	asterias	1				
51.223	snow crab	1				
51.235	sea cucumber	1				
51.259	snow crab	1				
51.265	snow crab	1				
51.274	sea cucumber	1				
51.289	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
51.298	sea cucumber	1				
51.336	sea cucumber	1				
51.341	sea cucumber	1	sunstar	1		
51.352	snow crab	1				
51.355	snow crab	1	sea cucumber	1		
51.394	sea cucumber	2				
51.412	snow crab	1				
51.442	sea cucumber	1				
51.451	snow crab	1				
54.451	toad crab	1				
51.467	sea cucumber	1				
51.491	sea cucumber	1				
51.516	sea cucumber	1				
51.519	snow crab	1				
51.523	sea cucumber	1				
51.533	sea cucumber	2				
51.547	sea cucumber	1				
51.549	sea cucumber	1				
51.567	sea cucumber	1				
51.567	sea cucumber	1				
51.571	sea cucumber	1	asterias	1		
51.58	sea cucumber	1				
51.582	sea cucumber	1				
51.586	asterias	1				
51.596	sea cucumber	1				
51.6	sea cucumber	1				
51.608	sea cucumber	1				
51.616	sea cucumber	1				
51.627	sea cucumber	1				
51.639	sea cucumber	1	snow crab	1		
51.643	sea cucumber	1				
51.547	asterias	1	snow crab	1		
51.651	asterias	1				
51.658	asterias	5				
51.663	sea cucumber	1	asterias	1		
51.672	snow crab	1				
51.674	sea cucumber	1				
51.681	sea cucumber	1				
51.692	sea cucumber	1				
51.694	northern red anemone	1				
51.714	sea cucumber	1				
51.516	northern red anemone	1				
51.747	sea cucumber	1				
51.749	sea cucumber	1				
51.75	sea cucumber	1				
51.754	snow crab	1				
51.765	sea cucumber	1				
51.767	sea cucumber	1				
51.769	sea cucumber	1				
51.771	snow crab	1	sea cucumber	1		
51.778	sea cucumber	1				
51.789	sea cucumber	1				
51.793	sea cucumber	1	snow crab	1		
51.794	sea cucumber	1				
51.799	sea cucumber	1				
51.824	sea cucumber	1				
51.828	asterias	2				
51.836	sea cucumber	2				
51.853	sea cucumber	1	asterias	1		
51.859	sea cucumber	1				
51.861	sea cucumber	1	snow crab	1		
51.876	sea cucumber	1				
51.888	sea cucumber	1				
51.903	asterias	1				
51.93	sea cucumber	1				
51.934	asterias	3				
51.936	sea cucumber	1				
51.941	sea cucumber	1	hake	1		
51.946	sea cucumber	1				
51.953	toad crab	1				
51.968	sea cucumber	1				
51.975	sea cucumber	1				
51.979	sea cucumber	1				
51.989	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
52.005	sea cucumber	1				
52.02	sea cucumber	1				
52.022	sea cucumber	1				
52.024	sea cucumber	1				
52.042	sea cucumber	1				
52.056	sea cucumber	1				
52.061	sea cucumber	1				
52.067	sea cucumber	1				
52.087	sea cucumber	1				
52.095	asterias	1				
52.115	asterias	3				
52.117	sea cucumber	1				
52.142	sea cucumber	1				
52.149	sea cucumber	1				
52.165	sea cucumber	1				
52.166	toad crab	1				
52.179	sea cucumber	1				
52.183	sea cucumber	1				
52.185	asterias	5				
52.197	sea cucumber	1				
52.199	sea cucumber	1				
52.201	sea cucumber	1				
52.216	sea cucumber	2				
52.235	sea cucumber	2				
52.256	sea cucumber	1				
52.263	asterias	1				
52.265	sea cucumber	1				
52.281	sea cucumber	1				
52.283	sea cucumber	1				
52.286	sea cucumber	1				
52.298	sea cucumber	1				
52.301	asterias	1				
52.311	sea cucumber	1				
52.312	sea cucumber	1				
52.32	sea cucumber	1				
52.321	sea cucumber	1				
52.324	asterias	2				
52.331	sea cucumber	1				
52.337	sea cucumber	1				
52.34	asterias	3				
52.351	asterias	1				
52.352	sea cucumber	1				
52.356	asterias	2				
52.358	sea cucumber	1				
52.362	sea cucumber	1				
52.37	sea cucumber	1				
52.375	sea cucumber	1				
52.39	sea cucumber	1				
52.401	sea cucumber	1				
52.41	sea cucumber	1				
52.436	asterias	1				
52.444	sea cucumber	1				
52.451	sea cucumber	1	northern red anemone	1		
52.462	sea cucumber	2				
52.496	sea cucumber	1				
52.526	asterias	1				
52.552	sea cucumber	2				
52.571	asterias	1				
52.577	sea cucumber	1	hake	1		
52.598	sea cucumber	1				
52.616	sea cucumber	1				
52.618	asterias	1				
52.644	sea cucumber	1	asterias	1	asterias	1
52.647	sea cucumber	1	snow crab	1		
52.65	sea cucumber	2				
52.653	sea cucumber	1	asterias	1		
52.668	asterias	1				
52.68	sea cucumber	1				
52.686	sea cucumber	1				
52.687	sea cucumber	2				
52.688	sea cucumber	1				
52.69	sea cucumber	1				
52.691	wolfish	1				
52.703	asterias	3				

KP	Fauna	#	Fauna	#	Fauna	#
52.727	sea cucumber	2				
52.732	wolffish	1				
52.75	sea cucumber	1				
52.764	asterias	1				
52.79	asterias	1				
52.792	sea cucumber	1				
52.82	sea cucumber	3				
52.823	sea cucumber	1				
52.832	sea cucumber	1				
52.834	sea cucumber	1				
52.852	sea cucumber	1				
55.857	sea cucumber	1				
52.865	sea cucumber	1				
52.895	asterias	1				
52.906	sea cucumber	1				
52.908	sea cucumber	1				
52.928	sea cucumber	1				
52.936	sea cucumber	1				
52.947	sea cucumber	1				
52.956	sea cucumber	1				
52.958	sea cucumber	1				
52.963	sea cucumber	1				
52.965	sea cucumber	1	asterias	1		
52.966	sea cucumber	1				
52.982	asterias	1				
52.988	sea cucumber	1				
52.995	sea cucumber	1	asterias	5		
53.035	sea cucumber	1	asterias	2		
53.046	sea cucumber	1				
53.053	sea cucumber	1				
53.061	sea cucumber	1				
53.087	sea cucumber	1				
53.09	wolffish	1				
53.092	asterias	1				
53.095	sea cucumber	1				
53.097	sea cucumber	1				
53.103	sea cucumber	2				
53.114	asterias	1				
53.117	sea cucumber	1				
53.12	asterias	1				
53.121	sea cucumber	2				
53.124	sea cucumber	2				
53.151	asterias	1				
53.17	sea cucumber	1				
53.196	sea cucumber	1				
53.223	asterias	3				
53.237	sea cucumber	1				
53.251	sea cucumber	1				
53.253	sea cucumber	1				
53.272	sea cucumber	1				
53.307	asterias	1				
53.316	wolffish	1				
53.328	sea cucumber	1				
53.346	sea cucumber	1				
53.349	sea cucumber	1	snow crab	1		
53.354	asterias	1				
53.367	sea cucumber	2				
53.382	sea cucumber	1				
53.406	sea cucumber	1				
53.416	sea cucumber	1				
53.424	sea cucumber	1				
53.426	sea cucumber	1				
53.443	sea cucumber	1				
53.455	sea cucumber	1				
53.457	sea cucumber	1				
53.46	asterias	1				
53.463	sea cucumber	1				
53.466	sea cucumber	1	asterias	1		
53.477	sea cucumber	1				
53.507	sea cucumber	1				
53.532	sea cucumber	1				
53.533	sea cucumber	1				
53.559	sea cucumber	2				
53.574	sea cucumber	2				

KP	Fauna	#	Fauna	#	Fauna	#
53.586	sea cucumber	1				
53.59	sea cucumber	1				
53.607	sea cucumber	1				
53.618	sea cucumber	1				
53.621	sea cucumber	1				
53.633	sea cucumber	1	asterias	1		
53.646	snow crab	1				
53.655	asterias	1	sea cucumber	1		
53.662	sea cucumber	1				
53.665	sea cucumber	1				
53.692	sea cucumber	1				
53.706	sea cucumber	1				
53.716	sea cucumber	1				
53.731	sea cucumber	1				
53.745	sand lance	1				
53.752	asterias	1				
53.779	sea cucumber	1	asterias	1		
53.796	sea cucumber	1				
53.836	sea cucumber	1				
53.855	sea cucumber	1				
53.866	asterias	1				
53.881	sea cucumber	1				
53.891	sea cucumber	3				
53.913	snow crab	1				
53.94	asterias	1				
53.959	asterias	1				
53.971	sea cucumber	1				
53.973	asterias	1				
53.975	sea cucumber	1				
53.988	sea cucumber	1				
53.99	wolfish	1				
54.006	sea cucumber	1				
54.008	sea cucumber	1				
54.013	sea cucumber	2				
54.019	sea cucumber	1				
54.082	sea cucumber	2				
54.102	sea cucumber	1				
54.107	redfish	1				
54.124	sea cucumber	1				
54.125	snow crab	1				
54.131	sea cucumber	1				
54.135	sea cucumber	1				
54.159	sea cucumber	1				
54.21	sea cucumber	1				
54.229	sea cucumber	1				
54.271	sea cucumber	1				
54.277	northern red anemone	1				
54.308	sea cucumber	1				
54.329	sea pen	1				
54.343	snow crab	1				
54.344	asterias	1				
54.352	sea cucumber	1				
54.362	sea cucumber	1				
54.371	sea cucumber	1				
54.405	sea cucumber	1				
54.442	sea cucumber	1				
54.449	sea cucumber	1				
54.469	sunstar	1				
54.494	sea cucumber	1				
54.529	sea cucumber	1				
54.549	sea cucumber	1				
54.552	asterias	2				
54.558	asterias	1				
54.563	asterias	1				
54.57	sea cucumber	1				
54.59	asterias	1				
54.601	toad crab	1				
54.614	snow crab	1				
54.64	sea cucumber	1				
54.657	northern red anemone	1				
54.673	asterias	3				
54.68	asterias	2				
54.687	asterias	2				
54.695	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
54.718	sea cucumber	1				
54.739	sea cucumber	1				
54.773	snow crab	1				
54.777	sea cucumber	1				
54.786	asterias	1				
54.811	snow crab	1				
54.845	asterias	1				
54.872	sea cucumber	1				
54.901	asterias	1				
54.925	snow crab	1				
54.936	asterias	1				
54.94	asterias	1				
55.065	asterias	1	sunstar	1		
55.08	asterias	1				
55.085	asterias	1				
55.101	northern red anemone	1				
55.145	northern red anemone	1				
55.155	sea cucumber	1	asterias	1		
55.165	sea cucumber	1				
55.182	asterias	1				
55.185	sunstar	1				
55.3	asterias	1				
55.35	sea cucumber	1				
55.5	asterias	1				
55.379	asterias	1				
55.414	sea cucumber	1				
55.5	asterias	1				
55.504	asterias	1				
55.507	asterias	3				
55.571	asterias	1				
55.589	asterias	1	redfish	1		
55.603	asterias	2				
55.607	redfish	1				
55.643	toad crab	1				
55.675	sea cucumber	1				
55.694	gadoid	1				
55.732	sea cucumber	1				
55.738	sea cucumber	1				
55.832	sea cucumber	1				
55.09	redfish	1				
55.934	sea cucumber	1				
55.985	sea cucumber	1				
56.02	sea cucumber	1				
56.067	toad crab	1				
56.121	sea cucumber	1				
56.122	asterias	1				
56.13	toad crab	1				
56.145	sea cucumber	1				
56.158	sea cucumber	1				
56.16	asterias	1				
56.193	sea cucumber	1				
56.26	sea cucumber	1				
56.273	asterias	1				
56.285	sculpin	1				
56.298	asterias	1				
56.317	sea cucumber	1				
56.387	asterias	1				
56.399	asterias	2				
56.419	asterias	1				
56.432	sea cucumber	2				
56.46	sea cucumber	1	asterias	1		
56.462	asterias	2				
56.468	sea cucumber	1				
56.528	sea cucumber	1	asterias	1		
56.533	sea cucumber	1	asterias	1		
56.542	asterias	1				
56.551	asterias	1				
56.599	sea cucumber	1				
56.611	snow crab	1	sea cucumber	1	asterias	2
56.667	sea cucumber	1				
56.675	asterias	3				
56.678	sea cucumber	1				
56.697	redfish	1				
56.738	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
56.741	asterias	3				
56.859	asterias	1				
56.926	asterias	1				
56.931	asterias	1				
56.96	sunstar	1				
56.961	sea cucumber	1				
56.966	asterias	1				
57.005	sea cucumber	1				
57.035	sea cucumber	1				
57.037	redfish	1				
57.087	sea cucumber	1				
57.153	sea cucumber	1				
57.165	sea cucumber	1				
57.17	sea cucumber	1				
57.226	redfish	1				
57.289	asterias	1				
57.352	sea cucumber	1				
57.373	sea cucumber	1				
57.487	sea cucumber	1				
57.508	asterias	1				
57.552	asterias	1				
57.579	sea cucumber	1				
57.672	sea cucumber	1				
57.693	asterias	1				
57.716	sea cucumber	1				
57.726	sea cucumber	1				
57.766	redfish	1				
57.796	sea cucumber	1				
57.853	sea cucumber	1				
57.898	sea cucumber	1				
57.914	sea cucumber	1				
57.926	sea cucumber	1				
57.936	sea cucumber	3				
57.987	sea cucumber	1	redfish	1		
58.058	sea cucumber	1				
58.078	sea cucumber	1				
58.108	sea cucumber	1				
58.168	sea cucumber	1				
58.191	sea cucumber	1				
58.211	sunstar	1				
58.228	sea cucumber	1				
58.238	sea cucumber	1				
58.25	sea cucumber	1				
58.285	sea cucumber	1				
58.305	sea cucumber	1				
58.328	sea cucumber	2				
58.336	asterias	1	redfish	1		
58.385	sea cucumber	1				
58.389	sea cucumber	1				
58.402	sea cucumber	1				
58.459	asterias	1				
58.476	asterias	1				
58.447	asterias	1				
58.57	snow crab	1				
58.589	asterias	1				
58.604	sea cucumber	1				
58.639	sea cucumber	1				
58.687	sea cucumber	1				
58.729	asterias	1				
58.78	sunstar	1				
58.803	asterias	1				
58.826	asterias	1				
58.837	asterias	1				
58.942	sea cucumber	1				
58.948	sea cucumber	1				
59.095	asterias	1				
59.107	asterias	1				
59.187	sea cucumber	1				
59.269	sea cucumber	1				
59.287	sea cucumber	1				
59.313	snow crab	1				
59.315	asterias	1				
59.338	asterias	1				
59.365	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
59.399	asterias	1				
59.466	sea cucumber	1				
59.505	asterias	1				
59.528	asterias	1				
59.575	sea cucumber	1				
59.596	sea cucumber	1				
59.612	sea cucumber	1				
59.62	sea cucumber	1				
59.679	sea cucumber	2				
59.687	sea cucumber	1				
59.711	sea cucumber	1				
59.767	sea cucumber	1				
59.802	sea cucumber	1	asterias	1		
59.82	sea cucumber	1				
59.833	asterias	1				
59.869	asterias	1				
59.892	sea cucumber	1				
59.908	asterias	1				
59.947	asterias	1				
59.95	sea cucumber	1				
59.963	asterias	1	sea cucumber	1		
60.026	sea cucumber	2	asterias	1		
60.038	asterias	2				
60.092	sea cucumber	3				
60.113	asterias	1				
60.121	sea cucumber	1				
60.156	asterias	1				
60.205	sea cucumber	1				
60.218	sea cucumber	1				
60.227	sea cucumber	2				
60.229	sea cucumber	1				
60.25	sea cucumber	1				
60.254	sea cucumber	2				
60.306	asterias	1				
60.362	sea cucumber	1				
60.364	asterias	1				
60.462	snow crab	1				
60.468	sea cucumber	1				
60.471	asterias	1				
60.498	asterias	1				
60.5	sea cucumber	1				
60.506	sea cucumber	1				
60.542	sea cucumber	2				
60.55	sea cucumber	1				
60.564	sea cucumber	1				
60.678	sea cucumber	1				
60.605	sea cucumber	1				
60.626	asterias	1				
60.631	sea cucumber	1				
60.639	asterias	1				
60.64	sea cucumber	1				
60.645	asterias	2				
60.7	asterias	1				
60.697	asterias	1				
60.734	sea cucumber	1				
60.747	sea cucumber	1				
60.763	sea cucumber	1				
60.78	sea cucumber	1				
60.818	sea cucumber	1				
60.831	sea cucumber	1				
60.859	sea cucumber	1				
60.866	sea cucumber	1				
60.876	asterias	1				
60.885	sea cucumber	1				
60.895	snow crab	1				
60.908	sea cucumber	1				
60.927	sea cucumber	1				
60.971	sea cucumber	1				
60.975	asterias	1				
61.043	asterias	1				
61.066	sea cucumber	1				
61.092	sea cucumber	1				
61.106	sea cucumber	1				
61.142	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
61.161	asterias	1				
61.17	sea cucumber	1				
61.179	sea cucumber	1				
61.198	asterias	1	sea cucumber	1		
61.201	asterias	2				
61.218	asterias	1				
61.241	sea cucumber	1				
61.253	sea cucumber	1				
61.264	sea cucumber	1				
61.268	sea cucumber	1				
61.276	sea cucumber	1				
61.331	sea cucumber	1				
61.337	polar sea star	1				
61.374	asterias	1				
61.406	asterias	1				
61.446	asterias	1				
61.5	northern red anemone	1				
61.501	polar asteriasarfish	1				
61.531	snow crab	1				
61.54	snow crab	1				
61.547	northern red anemone	1				
61.55	asterias	1				
61.56	asterias	1				
61.59	asterias	1				
61.608	snow crab	1				
61.616	sea cucumber	1				
61.625	sea cucumber	1				
61.627	asterias	1				
61.64	sea cucumber	1				
61.653	snow crab	1				
61.668	snow crab	1				
61.691	redfish	1				
61.697	asterias	2				
61.704	sea cucumber	2				
61.711	asterias	1				
61.764	asterias	1				
61.79	sea cucumber	1				
61.805	wolffish	1				
61.809	redfish	1				
61.828	sea cucumber	1				
61.86	asterias	1				
61.87	sea cucumber	1				
61.893	sea cucumber	1				
61.908	asterias	1				
61.953	sea cucumber	1				
61.969	sea cucumber	1				
61.971	sea cucumber	1	snow crab	1		
61.99	asterias	1				
62.022	asterias	1				
62.026	winter flounder	1				
62.028	sea cucumber	1				
62.031	asterias	1				
62.036	asterias	1				
62.038	asterias	1				
62.039	asterias	1				
62.063	snow crab	1				
62.1	asterias	1	sea cucumber	1		
62.121	sea cucumber	1				
62.151	asterias	1				
62.154	redfish	1				
62.195	asterias	1				
62.21	sea cucumber	1				
62.221	sea cucumber	1				
62.244	asterias	1				
62.274	sea cucumber	1				
62.276	asterias	1				
62.284	asterias	1				
62.322	sea cucumber	1				
62.337	sea cucumber	1				
62.348	asterias	1				
62.351	asterias	1				
62.36	asterias	1	sea cucumber	1		
62.384	sea cucumber	1				
62.392	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
62.395	sea cucumber	2				
62.417	asterias	2				
62.429	sea cucumber	1				
62.437	asterias	1				
62.439	sea cucumber	1				
62.445	sea cucumber	1	asterias	1		
62.448	asterias	1				
62.459	asterias	1				
62.46	sunstar	4				
62.481	sea cucumber	1	asterias	1		
62.488	sea cucumber	1				
62.502	sea cucumber	1				
62.531	sea cucumber	1	snow crab	1		
62.58	asterias	2				
62.599	asterias	1				
62.615	asterias	1	asterias	1		
62.631	sea cucumber	1				
62.643	asterias	1	asterias	1		
62.649	sea cucumber	1				
62.651	asterias	1				
62.674	asterias	1				
62.676	sea cucumber	1				
62.689	asterias	1				
62.696	toad crab	1				
62.711	asterias	1				
62.739	snow crab	1				
62.763	redfish	1				
62.772	asterias	1				
62.785	sea cucumber	2				
62.829	asterias	1				
62.847	sea cucumber	1				
62.852	sea cucumber	1				
62.853	toad crab	1				
62.884	asterias	1	asterias	1		
62.89	sea cucumber	1				
62.9	asterias	1				
62.905	sea cucumber	1				
62.931	asterias	1				
62.936	sea cucumber	1				
62.946	asterias	1				
62.959	snow crab	1				
62.998	asterias	1				
63.064	asterias	2				
63.072	sea cucumber	1				
63.1	sea cucumber	1				
63.156	asterias	1				
63.181	asterias	1				
63.244	asterias	1				
63.257	sea cucumber	1				
63.27	asterias	1				
63.272	asterias	2				
63.302	asterias	1				
63.328	asterias	1				
63.337	asterias	1	sea cucumber	1		
63.362	asterias	1				
63.391	asterias	2				
63.421	sea cucumber	1				
63.526	sea cucumber	1				
63.572	wolffish	1				
63.587	asterias	1				
63.6	asterias	1				
63.61	toad crab	1				
63.614	sea cucumber	1				
63.631	sea cucumber	1				
63.641	asterias	1				
63.691	asterias	1				
63.698	asterias	1				
63.7	redfish	1				
63.73	asterias	1				
63.857	asterias	3				
63.881	sea cucumber	1				
63.883	asterias	1				
63.933	sea cucumber	1				
63.994	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
64.003	sea cucumber	1				
64.017	sea cucumber	1				
64.067	sea cucumber	1	snow crab	1		
64.085	sea cucumber	1				
64.103	sea cucumber	1				
64.116	sea cucumber	1				
64.128	sea cucumber	1				
64.163	asterias	1				
64.174	sea cucumber	1				
64.177	asterias	1				
64.193	redfish	1				
64.239	sea cucumber	1				
64.296	sea cucumber	1				
64.376	asterias	1				
64.402	sea cucumber	1				
64.433	sea cucumber	1	asterias	1		
64.435	sea cucumber	1				
64.451	sea cucumber	1				
64.46	sea cucumber	1	snow crab	1		
64.482	sea cucumber	1				
64.544	asterias	1				
64.55	sea cucumber	1				
64.568	asterias	1				
64.601	asterias	1				
64.622	asterias	1	sea cucumber	1		
64.627	asterias	2				
64.648	asterias	2				
64.663	sea cucumber	1				
64.668	sea cucumber	1				
64.677	asterias	1				
64.68	asterias	1				
64.706	sea cucumber	2				
64.79	sea cucumber	1				
64.809	snow crab	1				
64.818	sea cucumber	1				
64.82	sea cucumber	1				
64.88	sea cucumber	1	snow crab	1		
64.905	sea cucumber	1				
64.915	sea cucumber	1				
64.925	sea cucumber	1				
64.936	asterias	1				
64.946	sea cucumber	1				
64.956	asterias	1				
64.981	sea cucumber	1				
64.986	sea cucumber	1				
65.026	sea cucumber	1				
65.032	sea cucumber	3				
65.048	asterias	1				
65.098	toad crab	1				
65.213	asterias	1				
65.232	asterias	1				
65.234	asterias	1				
65.259	sea cucumber	1				
65.262	sea cucumber	1				
65.304	sea cucumber	1				
65.315	sea cucumber	2				
65.334	sea cucumber	1				
65.356	asterias	1				
65.366	asterias	1				
65.372	asterias	1				
65.387	sea cucumber	1				
65.39	sea cucumber	1				
65.415	sea cucumber	1				
65.425	sea cucumber	1				
65.432	sea cucumber	1				
65.447	sea cucumber	1				
65.584	asterias	1				
65.6	asterias	1				
65.674	sea cucumber	1				
65.697	asterias	1				
65.74	sea cucumber	2				
65.741	asterias	1				
65.787	asterias	1				
65.771	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
65.781	sea cucumber	1				
65.79	sea cucumber	1				
65.841	asterias	1	sea cucumber	1		
65.851	sea cucumber	1				
65.867	sea cucumber	1				
65.884	sea cucumber	1				
66.065	asterias	1				
66.113	asterias	1				
66.145	asterias	1				
66.164	sea cucumber	1				
66.223	sea cucumber	1				
66.336	sea cucumber	1				
66.351	redfish	1				
66.378	sea cucumber	1				
66.379	sea pen	1				
66.541	sea cucumber	1				
66.57	asterias	2				
66.585	sea cucumber	1				
66.625	sea cucumber	1				
66.632	sea cucumber	1				
66.699	sea cucumber	1				
66.701	asterias	1				
66.709	asterias	3				
66.716	sea cucumber	2				
66.722	sea cucumber	2				
66.798	sea cucumber	1				
66.827	sea cucumber	1				
66.901	asterias	1				
66.95	asterias	1				
67.005	sea cucumber	1	asterias	1		
67.009	sea cucumber	1				
69.051	asterias	1				
67.088	sea cucumber	2				
67.094	asterias	1				
67.123	asterias	1				
67.133	sea cucumber	1				
67.176	snow crab	1	asterias	1		
67.212	sea cucumber	1				
67.269	asterias	1				
67.282	sea cucumber	1				
67.32	sea cucumber	3				
67.401	asterias	1				
67.409	asterias	1				
67.418	asterias	1				
67.425	asterias	1	sea cucumber	1		
67.438	asterias	1				
67.441	asterias	1				
67.447	asterias	2				
67.465	sea cucumber	1				
67.47	asterias	1				
67.488	asterias	1				
67.491	sea cucumber	1				
67.504	asterias	1				
67.512	asterias	1				
67.514	asterias	2	sea cucumber	1		
67.576	asterias	1				
67.588	asterias	1				
67.599	sea cucumber	1				
67.604	asterias	1				
67.608	asterias	1				
67.631	asterias	2				
67.647	asterias	1				
67.648	sea cucumber	1				
67.657	sea cucumber	1				
67.667	sea cucumber	1	asterias	1		
67.688	asterias	1				
67.698	sea cucumber	1				
67.702	sea cucumber	1				
67.708	sea cucumber	2				
67.712	sea cucumber	1				
67.735	asterias	1				
67.778	snow crab	1				
67.78	sea cucumber	1				
67.786	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
67.789	sea cucumber	1				
67.803	sea cucumber	3				
67.813	sea cucumber	1				
67.816	sea cucumber	1				
67.836	sea cucumber	1	asterias	1		
67.84	sea cucumber	1	asterias	1		
67.842	sea cucumber	1				
67.852	sea cucumber	1				
67.861	asterias	1				
67.877	sea cucumber	1				
67.884	asterias	1				
67.887	asterias	1	sea cucumber	1		
67.908	sea cucumber	1				
67.913	asterias	1				
67.928	asterias	1				
67.936	asterias	1				
67.94	asterias	1				
67.953	asterias	1				
67.964	sea cucumber	2				
67.992	sea cucumber	2				
67.993	sea cucumber	1				
67.998	sea cucumber	1				
68.047	sunstar	1				
68.054	sea cucumber	2				
68.08	sea cucumber	2				
68.086	asterias	1				
68.126	sea cucumber	1				
68.133	sea cucumber	1				
68.14	sea cucumber	2				
68.153	sea cucumber	1				
68.176	sea cucumber	1	asterias	1		
68.204	asterias	1				
68.236	asterias	1				
68.264	asterias	1	sea cucumber	1		
68.273	sea cucumber	1				
68.287	asterias	1				
68.301	sea cucumber	3				
68.309	sea cucumber	1				
68.315	sea cucumber	1				
68.327	sea cucumber	1				
68.343	sea cucumber	2				
68.349	sea cucumber	1				
68.359	sea cucumber	1	asterias	1		
68.387	sea cucumber	1				
68.394	sea cucumber	1				
68.401	sea cucumber	1				
68.416	sea cucumber	1				
68.503	asterias	1				
68.505	sea cucumber	1				
68.507	sea cucumber	1				
68.532	sea cucumber	1				
68.552	asterias	1				
68.61	asterias	1				
68.635	asterias	1				
68.637	sea cucumber	1				
68.668	sea cucumber	1				
68.675	sea cucumber	1				
68.68	sea cucumber	1				
68.703	sea cucumber	1				
68.707	asterias	1				
68.74	snow crab	1				
68.741	sea cucumber	1				
68.753	sea cucumber	1				
68.766	asterias	1				
68.767	sea cucumber	1	asterias	1		
68.801	asterias	1	asterias	1		
68.829	asterias	1				
68.841	sea cucumber	4				
68.859	sea cucumber	1	asterias	1		
68.861	sea cucumber	1				
68.883	sea cucumber	1				
68.887	sea cucumber	1				
68.905	sea cucumber	1				
68.922	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
68.927	asterias	1				
68.953	asterias	1				
68.964	sea cucumber	1				
68.969	asterias	1				
68.973	sea cucumber	1				
68.976	sea cucumber	1				
68.985	sea cucumber	1				
68.997	sea cucumber	1				
69.01	asterias	1				
69.025	sea cucumber	1				
69.027	sea cucumber	1				
69.053	sea cucumber	1				
69.066	sunstar	1				
69.082	asterias	1				
69.087	sand lance	1				
69.119	asterias	1	sea cucumber	1		
69.138	sea cucumber	1				
69.145	asterias	1				
69.174	sea cucumber	1				
69.179	sea cucumber	1				
69.196	asterias	1				
69.198	sea cucumber	1				
69.202	asterias	1				
69.233	asterias	1				
69.246	sea cucumber	2				
69.248	sea cucumber	1				
69.256	toad crab	1				
69.263	sea cucumber	1				
69.268	sea cucumber	1				
69.297	sea cucumber	1				
69.303	sea cucumber	1	asterias	1		
69.309	sea cucumber	1				
69.318	sea cucumber	1				
69.326	sea cucumber	1				
69.336	sea cucumber	1				
69.337	sea cucumber	1				
69.342	sea cucumber	1				
69.395	sea cucumber	2				
69.404	sea cucumber	2				
69.408	sea cucumber	1				
69.411	sea cucumber	1				
69.423	sea cucumber	1				
69.431	sea cucumber	1				
69.436	sea cucumber	1				
69.453	asterias	1				
69.456	asterias	1				
69.466	sea cucumber	1				
69.47	sea cucumber	1				
69.508	sea cucumber	1				
69.519	sea cucumber	1				
69.577	sea cucumber	1				
69.582	asterias	1				
69.597	asterias	1				
69.608	sea cucumber	1				
69.61	asterias	1				
69.645	sea cucumber	1				
69.675	sea cucumber	1				
69.701	sea cucumber	1				
69.713	asterias	1				
69.722	sea cucumber	1				
69.73	asterias	1				
69.734	asterias	1				
69.743	sea cucumber	1				
69.757	sea cucumber	1				
69.763	sea cucumber	1				
69.768	sea cucumber	1				
69.769	asterias	1				
69.771	sea cucumber	1				
69.792	sea cucumber	1				
69.813	sea cucumber	1				
69.822	sea cucumber	1				
69.84	asterias	1				
69.843	asterias	1				
69.866	sunstar	1	sea cucumber	1		

KP	Fauna	#	Fauna	#	Fauna	#
69.885	sea cucumber	2				
69.896	asterias	1				
69.903	sea cucumber	1				
69.906	sea cucumber	1				
69.928	sea cucumber	1				
69.96	sea cucumber	1				
69.988	asterias	1				
69.99	asterias	1				
69.996	sea cucumber	1				
70.022	sea cucumber	1				
70.028	sea cucumber	1				
70.042	sea cucumber	1				
70.07	asterias	1				
70.073	sea cucumber	1				
70.09	asterias	1				
70.115	asterias	1				
70.136	sea cucumber	1				
70.142	snow crab	1				
70.211	sea cucumber	1				
70.216	asterias	1				
70.228	sea cucumber	1				
70.239	sea cucumber	1				
70.247	asterias	1				
70.252	sea cucumber	1				
70.253	asterias	1				
70.259	sea cucumber	1				
70.282	sea cucumber	1				
70.292	asterias	1				
70.297	asterias	1				
70.318	sea cucumber	2				
70.325	sunstar	1				
70.338	asterias	1				
70.378	sea cucumber	1				
70.198	asterias	1				
70.425	sea cucumber	1				
70.432	sea cucumber	1				
70.436	sea cucumber	1				
70.44	asterias	1				
70.442	sea cucumber	1				
70.448	sea cucumber	1				
70.519	toad crab	1	sea cucumber	1		
70.545	asterias	1				
70.568	toad crab	1				
70.59	sea cucumber	1				
70.626	asterias	1				
70.638	sea cucumber	1				
70.639	sea cucumber	1				
70.652	asterias	1				
70.658	asterias	1				
70.705	asterias	1				
70.712	sea cucumber	1				
70.732	sea cucumber	1				
70.764	asterias	1				
70.772	asterias	1				
70.787	asterias	1				
70.806	sunstar	1				
70.814	sand lance	1				
70.825	sea cucumber	1				
70.84	asterias	3				
70.882	sea cucumber	1				
70.894	sea cucumber	1				
70.9	asterias	1				
70.907	asterias	1				
70.914	asterias	1				
70.922	asterias	1				
70.936	snow crab	1				
70.939	sea cucumber	1				
70.961	asterias	1				
70.964	sea cucumber	1				
71.026	sea cucumber	1				
71.028	sea cucumber	1				
71.055	sea cucumber	1				
71.064	asterias	1				
71.121	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
71.137	load crab	1				
71.192	sea cucumber	1				
71.224	sea cucumber	1				
71.26	asterias	1				
71.264	asterias	1				
71.275	sea cucumber	1				
71.29	sea cucumber	1				
71.303	sea cucumber	2				
71.332	sea cucumber	1				
71.344	asterias	1				
71.354	sea cucumber	1				
71.388	sea cucumber	1				
71.418	sea cucumber	1				
71.451	sea cucumber	1				
71.469	sea cucumber	1				
71.482	sea cucumber	1				
71.516	sea cucumber	1				
71.525	sea cucumber	1				
71.579	sea cucumber	1				
71.598	snow crab	1				
71.624	sea cucumber	2				
71.661	asterias	1				
71.67	asterias	1				
71.689	asterias	1				
71.703	sea cucumber	1				
71.8	sea cucumber	1				
71.84	asterias	1				
71.853	asterias	1				
71.86	sea cucumber	1				
71.865	asterias	1				
71.939	sea cucumber	1				
71.964	sea cucumber	1				
71.978	asterias	1				
72.001	asterias	1				
72.003	sea cucumber	1				
72.011	sea cucumber	1				
72.017	asterias	1				
72.02	asterias	1				
72.023	asterias	1				
72.027	asterias	4				
72.035	sea cucumber	1				
72.042	asterias	1				
72.047	sea cucumber	1				
72.076	asterias	1				
72.077	asterias	1				
72.079	asterias	1				
72.081	asterias	1				
72.085	asterias	1				
72.094	asterias	1				
72.095	asterias	1				
72.106	asterias	1				
72.107	sea cucumber	1				
72.13	asterias	1				
72.15	asterias	1				
72.152	asterias	2				
72.167	asterias	2				
72.193	asterias	1				
72.195	asterias	1				
72.228	sea cucumber	1				
72.235	sea cucumber	1	asterias	1		
72.257	asterias	1				
72.302	asterias	1	asterias	1		
72.315	asterias	1				
72.32	asterias	1				
72.355	asterias	1	redfish	1		
72.381	redfish	1				
72.437	northern red anemone	1				
73.441	asterias	1				
72.463	asterias	3				
72.469	asterias	1				
72.482	asterias	1				
72.487	asterias	1				
72.489	asterias	2	asterias	1		
72.52	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
72.605	asterias	1				
72.646	northern red anemone	1				
72.674	asterias	1				
72.751	asterias	1				
72.765	asterias	1				
72.775	sea cucumber	5				
72.814	asterias	1				
72.837	asterias	2				
72.934	haddock	1				
72.974	asterias	1				
73.004	asterias	1				
73.044	asterias	1				
73.088	northern red anemone	1				
73.151	sea cucumber	1	snow crab	1		
73.159	asterias	1				
73.17	asterias	2				
73.258	asterias	2	asterias	2		
73.322	asterias	1				
73.328	asterias	1				
73.33	asterias	1				
73.388	asterias	1	redfish	2		
73.405	northern red anemone	1				
73.468	asterias	1				
73.487	asterias	1				
73.49	asterias	1				
73.499	asterias	2				
73.52	asterias	1				
73.528	asterias	1				
73.541	asterias	1				
73.559	asterias	1				
73.606	asterias	1				
73.651	sea cucumber	2				
73.66	asterias	1				
73.665	asterias	2				
73.738	asterias	1				
73.777	asterias	1				
73.795	asterias	1				
73.8	asterias	1				
73.821	sea cucumber	1				
73.849	asterias	1				
73.871	asterias	2				
73.877	asterias	1	haddock	1		
73.912	asterias	1				
73.927	asterias	1				
73.93	asterias	1				
73.933	asterias	1				
74.003	northern red anemone	1				
74.01	asterias	1				
74.013	snow crab	1				
74.071	asterias	1				
74.1	asterias	1				
74.108	asterias	1				
74.118	asterias	1				
74.123	northern red anemone	1				
74.184	asterias	1				
74.194	asterias	1				
74.196	asterias	1				
74.215	asterias	1				
74.226	asterias	1				
74.249	sea cucumber	1				
74.254	asterias	1				
74.261	asterias	1				
74.279	asterias	2				
74.295	asterias	1				
74.326	asterias	1				
74.328	northern red anemone	1				
74.343	haddock	1				
74.402	asterias	1				
74.417	asterias	1				
74.432	toad crab	1				
74.435	northern red anemone	1	asterias	1		
74.443	asterias	1				
74.448	asterias	1				
74.449	northern red anemone	1				

KP	Fauna	#	Fauna	#	Fauna	#
74.456	toad crab	1				
74.467	asterias	1				
74.473	asterias	1				
74.476	sand lance	1				
74.478	asterias	2				
74.505	asterias	1				
74.535	asterias	1				
74.54	asterias	5				
74.547	asterias	1				
74.555	asterias	1	asterias	1		
74.559	asterias	1				
74.563	northern red anemone	1				
74.599	asterias	2				
74.602	asterias	1				
74.639	asterias	1				
74.65	asterias	1				
74.653	asterias	1				
74.656	asterias	1				
74.688	asterias	1				
74.7	sea cucumber	1	haddock	1		
74.711	haddock	1				
74.719	asterias	1				
74.722	asterias	1				
74.726	asterias	1				
74.751	asterias	1				
74.752	asterias	1				
74.753	asterias	1				
74.76	asterias	1				
74.78	asterias	1				
74.783	asterias	1				
74.795	asterias	1				
74.797	snow crab	1				
74.799	asterias	1				
74.803	asterias	1				
74.818	toad crab	1				
74.823	sea cucumber	2				
74.837	asterias	1				
74.849	asterias	1				
74.882	asterias	1				
74.883	snow crab	1				
74.9	asterias	1				
74.901	asterias	1				
74.914	asterias	1				
74.924	snow crab	1				
74.928	wolffish	1				
74.931	asterias	1				
74.938	asterias	1				
74.953	asterias	2				
74.96	asterias	1				
74.968	northern red anemone	1				
74.978	asterias	3				
74.98	asterias	1				
74.992	asterias	2				
75.013	asterias	1				
75.042	snow crab	1				
75.048	asterias	1				
75.06	sea cucumber	1				
75.073	asterias	1				
75.083	asterias	1				
75.099	sea cucumber	1				
75.146	asterias	1				
75.149	asterias	1				
75.161	asterias	1				
75.177	northern red anemone	1				
75.215	asterias	1				
75.217	asterias	1				
75.221	asterias	1	northern red anemone	1		
75.289	asterias	1				
75.291	snow crab	1	asterias	2		
75.295	snow crab	1				
75.302	asterias	1				
75.309	asterias	1				
75.312	asterias	1				
75.317	northern red anemone	1				

KP	Fauna	#	Fauna	#	Fauna	#
75.348	toad crab	1	asterias	1		
75.352	asterias	1				
75.356	asterias	1	gadoid	1		
75.37	asterias	1				
75.376	asterias	1				
75.388	asterias	1				
75.398	asterias	1				
75.406	asterias	1				
75.409	asterias	1				
75.428	asterias	1				
75.43	asterias	2				
75.432	asterias	1				
75.444	sand lance	1				
75.445	asterias	2				
75.464	asterias	2				
75.473	asterias	1				
75.483	asterias	1				
75.486	asterias	1				
75.49	sunstar	1				
75.5	sand lance	1				
75.506	asterias	1				
75.512	asterias	2				
75.513	asterias	1				
75.516	asterias	1				
75.525	toad crab	1				
75.528	asterias	1				
567	northern red anemone	1				
75.58	asterias	1				
75.594	asterias	1				
75.616	haddock	1				
75.632	asterias	1				
75.636	asterias	1				
75.639	asterias	1				
75.642	sunstar	1				
75.65	asterias	1				
75.651	asterias	1				
75.664	haddock	1				
75.674	toad crab	1				
75.678	sea cucumber	1				
75.679	toad crab	1				
75.69	asterias	2				
75.698	toad crab	1				
75.706	asterias	1				
75.721	northern red anemone	1				
75.733	asterias	1				
75.746	toad crab	1				
75.757	asterias	1				
75.771	asterias	1				
75.777	asterias	1				
75.78	snow crab	1				
75.786	sea cucumber	1				
75.795	asterias	1				
75.811	asterias	1				
75.829	snow crab	1				
75.831	asterias	1				
75.838	northern red anemone	1				
75.845	asterias	1				
75.855	asterias	1				
75.861	asterias	1				
75.866	sunstar	1				
75.876	asterias	1				
75.879	asterias	1				
75.887	asterias	1				
75.919	asterias	1				
75.937	asterias	1				
75.951	asterias	1				
75.963	asterias	1				
75.975	asterias	1				
76	northern red anemone	1				
76.01	asterias	1				
76.025	northern red anemone	1				
76.033	asterias	1				
76.03	asterias	2				
76.04	asterias	2				

KP	Fauna	#	Fauna	#	Fauna	#
76.052	sea cucumber	1				
76.054	northern red anemone	1				
76.055	northern red anemone	1				
76.074	northern red anemone	1				
76.078	asterias	1				
76.099	snow crab	1				
76.128	asterias	2				
76.138	asterias	2				
76.164	asterias	1				
76.207	asterias	1				
76.211	snow crab	1				
76.214	snow crab	1				
76.22	asterias	1				
76.243	asterias	1				
76.266	asterias	1				
76.287	sea cucumber	1				
76.306	toad crab	1				
76.326	sea cucumber	1				
76.354	asterias	1				
76.36	northern red anemone	1				
76.377	northern red anemone	1				
76.384	sea cucumber	1				
76.39	snow crab	1	haddock	1		
76.395	snow crab	1				
76.4	snow crab	1				
76.408	toad crab	1				
76.409	sea cucumber	1				
76.424	sea cucumber	1				
76.426	snow crab	1				
76.433	asterias	2				
76.447	snow crab	1				
76.473	asterias	1				
76.475	asterias	1				
76.48	snow crab	1				
76.49	asterias	1				
76.498	asterias	1	sea cucumber	1		
76.503	snow crab	1				
76.524	asterias	1				
76.525	sea cucumber	1				
76.535	asterias	1				
76.567	northern red anemone	1				
76.572	asterias	1				
76.596	sun star	1				
76.61	northern red anemone	1				
76.611	asterias	1				
76.621	asterias	1				
76.629	toad crab	1				
76.635	snow crab	1				
76.663	snow crab	1				
76.67	asterias	2				
76.678	asterias	2				
76.681	northern red anemone	2				
76.687	snow crab	1				
76.713	snow crab	1				
76.723	asterias	1				
76.725	snow crab	1				
76.736	asterias	1				
76.738	asterias	1				
76.752	snow crab	1				
76.76	asterias	2				
76.768	snow crab	2				
76.783	toad crab	1				
76.792	asterias	3				
76.803	asterias	3				
76.812	asterias	2				
76.831	asterias	2	sea cucumber	2		
76.842	asterias	1				
76.852	asterias	1				
76.857	asterias	1				
76.87	asterias	1				
76.874	northern red anemone	1	sea cucumber	1	asterias	1
76.879	asterias	1				
76.892	asterias	1				
76.901	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
76.906	northern red anemone	1				
76.922	asterias	1				
76.93	asterias	1				
76.938	asterias	1				
76.949	snow crab	1	asterias	1		
76.957	asterias	1				
76.969	asterias	1				
76.976	sea cucumber	1				
76.977	asterias	1				
76.995	asterias	1				
77.001	toad crab	1				
77.009	toad crab	1				
77.016	asterias	1				
77.019	asterias	1				
77.036	asterias	2				
77.049	asterias	1				
77.067	asterias	1				
77.096	asterias	1				
77.106	asterias	1				
77.114	asterias	1	haddock	1		
77.116	asterias	1				
77.12	toad crab	1	haddock	1		
77.123	asterias	1				
77.138	asterias	1				
77.154	asterias	1				
77.16	snow crab	1				
77.162	sunstar	1	asterias	1		
77.17	redfish	1				
77.201	asterias	1				
77.258	northern red anemone	2				
77.262	asterias	1				
77.271	snow crab	1				
77.273	asterias	2				
77.327	asterias	1				
77.338	toad crab	2				
77.352	asterias	1				
77.37	snow crab	1				
77.392	snow crab	2				
77.42	snow crab	1				
77.421	asterias	1				
77.434	snow crab	1				
77.441	asterias	1				
77.445	northern red anemone	1				
77.457	asterias	2				
77.464	asterias	1				
77.474	asterias	2				
77.512	asterias	1				
77.555	snow crab	1				
77.589	northern red anemone	1				
77.604	northern red anemone	1				
77.605	asterias	1				
77.607	asterias	1				
77.67	asterias	1				
77.697	snow crab	1				
77.729	toad crab	1				
77.738	toad crab	1				
77.753	asterias	2				
77.789	Jonah crab	1				
77.802	asterias	1				
77.806	snow crab	1				
77.821	asterias	1				
77.847	asterias	1				
77.844	asterias	3				
77.871	asterias	1				
77.886	asterias	1				
77.89	asterias	1	sea cucumber	1		
77.898	asterias	1				
77.966	snow crab	1				
77.997	asterias	4	asterias	1		
78.002	asterias	1	snow crab	1		
78.024	sea cucumber	1				
78.046	asterias	2				
78.101	northern red anemone	1				
78.11	snow crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
78.116	northern red anemone	1				
78.144	asterias	1	asterias	1		
78.19	snow crab	1	asterias	1		
78.201	asterias	1				
78.204	northern red anemone	1				
78.228	northern red anemone	1	snow crab	1		
78.231	northern red anemone	1	sea cucumber	1		
78.246	snow crab	1				
78.255	sea cucumber	2				
78.264	sea cucumber	1				
78.278	asterias	1				
78.283	asterias	1				
78.3	northern red anemone	2				
78.329	asterias	1				
78.336	northern red anemone	1				
78.341	asterias	1				
78.355	asterias	1				
78.378	asterias	1				
78.39	asterias	1				
78.394	asterias	1				
78.425	asterias	1				
78.437	sunstar	1				
78.455	asterias	1				
78.472	asterias	1				
78.499	asterias	2				
78.501	asterias	1				
78.503	asterias	1				
78.511	northern red anemone	1				
78.548	asterias	2	sea cucumber	1		
78.551	snow crab	1				
78.56	asterias	2				
78.562	asterias	2				
78.572	asterias	3				
78.582	sea cucumber	1				
78.584	asterias	1				
78.611	toad crab	1				
78.618	sea cucumber	1	asterias	1		
78.642	snow crab	1	asterias	1		
78.657	gadoid	1				
78.666	asterias	1				
78.67	sea cucumber	1				
78.679	asterias	1				
78.687	asterias	1				
78.706	asterias	1				
78.735	sea cucumber	1				
78.74	sea cucumber	1				
78.76	northern red anemone	1				
78.766	northern red anemone	1				
78.825	gadoid	1				
78.831	asterias	2				
78.848	snow crab	1				
78.895	asterias	2				
78.897	asterias	1				
78.936	asterias	1				
78.963	asterias	1				
78.967	gadoid	1				
78.974	pollock	1				
79.014	sunstar	1				
79.027	snow crab	1				
79.031	asterias	1	gadoid	2		
79.047	sea cucumber	1	asterias	1		
79.07	snow crab	1				
79.079	snow crab	1				
79.103	sunstar	1	snow crab	1		
79.143	cod	1				
79.151	sea cucumber	1				
79.166	snow crab	1				
79.186	sea cucumber	1	gadoid	1		
79.197	asterias	1				
79.212	asterias	1				
79.232	sea cucumber	1				
79.318	sea cucumber	1				
79.321	toad crab	1				
79.323	sea cucumber	2				

KP	Fauna	#	Fauna	#	Fauna	#
79.326	northern red anemone	1				
79.328	redfish	1	asterias	1		
79.332	sea cucumber	1				
79.353	snow crab	2				
79.409	asterias	1				
79.413	asterias	1				
79.437	asterias	1				
79.447	asterias	1				
79.454	asterias	1				
79.456	asterias	1	snow crab	1		
79.492	asterias	1				
79.504	snow crab	1				
79.513	snow crab	1	asterias	1		
79.55	asterias	1				
79.552	snow crab	1				
79.567	asterias	1				
79.569	snow crab	1				
79.586	snow crab	1				
79.589	asterias	1				
79.598	asterias	1				
79.616	asterias	1				
79.628	asterias	1				
79.636	asterias	1				
79.648	asterias	1				
79.672	asterias	1				
79.678	asterias	1				
79.691	sunstar	1				
79.714	asterias	1				
79.742	asterias	1	snow crab	1		
79.76	asterias	1				
79.844	asterias	1				
79.855	asterias	2				
79.862	snow crab	1				
79.882	snow crab	1				
79.892	asterias	1				
79.933	sea cucumber	1				
79.941	asterias	1				
79.964	sunstar	1				
79.967	snow crab	1				
79.98	asterias	1	asterias	1		
80.02	asterias	1				
80.044	asterias	1	snow crab	1		
80.092	asterias	1				
80.103	asterias	1				
80.106	asterias	1	asterias	1		
80.125	snow crab	1				
80.139	toad crab	1				
80.163	snow crab	2				
80.175	asterias	1				
80.188	asterias	1				
80.228	snow crab	1				
80.241	asterias	1				
80.259	asterias	1	asterias	1		
80.273	sea cucumber	1				
80.285	asterias	1				
80.306	sea cucumber	1				
80.316	asterias	1				
80.318	northern red anemone	1	asterias	1		
80.33	sea cucumber	1				
80.334	asterias	1				
80.346	snow crab	1				
80.391	sunstar	1				
80.41	northern red anemone	1	snow crab	1		
80.428	asterias	1				
80.433	toad crab	1				
80.463	sea cucumber	1	snow crab	1		
80.482	redfish	1				
80.504	snow crab	1				
80.547	asterias	1				
80.575	snow crab	1				
80.609	asterias	1				
80.624	asterias	1				
80.637	northern red anemone	1				
80.642	snow crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
80.662	asterias	1	redfish	2		
80.67	northern red anemone	1				
80.694	asterias	1				
80.698	asterias	1	gadoid	1		
80.706	asterias	1				
80.709	asterias	1				
80.736	asterias	1				
80.749	snow crab	1				
80.762	asterias	1				
80.768	snow crab	1				
80.772	redfish	1				
80.785	sea cucumber	1				
80.803	snow crab	1				
80.863	snow crab	1				
80.879	asterias	1				
80.918	haddock	1				
80.938	sea cucumber	1				
80.947	sea cucumber	1				
80.98	sunstar	1				
81.002	asterias	1				
81.023	northern red anemone	1				
81.042	asterias	1				
81.062	asterias	2				
81.068	sea cucumber	1				
81.101	asterias	2				
81.106	gadoid	1				
81.124	asterias	2				
81.13	asterias	1				
81.14	asterias	1				
81.16	asterias	1				
81.169	asterias	1	sea cucumber	1		
81.18	asterias	3				
81.183	asterias	1	asterias	1		
81.199	asterias	1				
81.206	asterias	1				
81.221	sea cucumber	1				
81.226	asterias	1				
81.228	asterias	1				
81.238	sea cucumber	2				
81.24	asterias	1				
81.245	asterias	1				
81.26	snow crab	1				
81.263	toad crab	1	asterias	1		
81.286	asterias	1				
81.302	asterias	1				
81.314	sea cucumber	1				
81.326	asterias	2				
81.358	asterias	1				
81.36	redfish	10				
81.373	asterias	1				
81.403	asterias	2	asterias	1		
81.427	asterias	2				
81.43	sunstar	1	asterias	1		
81.462	toad crab	1				
81.468	sea cucumber	1				
81.505	asterias	1				
81.509	asterias	1				
81.54	asterias	2				
81.559	asterias	1				
81.576	redfish	1				
81.577	asterias	1	asterias	1		
81.597	asterias	1				
81.61	asterias	1				
81.634	asterias	1	sea cucumber	1		
81.666	asterias	1				
81.687	sea cucumber	1				
81.69	asterias	1				
81.717	asterias	1				
81.72	asterias	1				
81.725	redfish	1				
81.744	sea cucumber	1				
81.752	asterias	1				
81.758	asterias	2				
81.774	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
81.806	asterias	1				
81.818	asterias	2				
81.83	asterias	2				
81.839	asterias	2				
81.846	asterias	1				
81.852	asterias	1				
81.854	asterias	2				
81.858	asterias	1				
81.865	asterias	1				
81.873	asterias	1				
81.916	asterias	1				
81.971	asterias	1				
81.981	asterias	1				
82.011	sea cucumber	1				
82.044	asterias	1				
82.062	asterias	1				
82.068	snow crab	1				
82.072	sunstar	1				
82.073	asterias	1				
82.092	asterias	1				
82.094	toad crab	1				
82.127	asterias	2				
82.131	asterias	1				
82.148	asterias	1				
82.17	asterias	1				
82.174	asterias	1				
82.177	asterias	1				
82.183	asterias	1				
82.212	sea cucumber	1				
82.258	asterias	1				
82.26	asterias	1	asterias	3		
82.263	asterias	1				
82.27	asterias	1				
82.31	asterias	1				
82.313	toad crab	1				
82.319	asterias	10				
82.335	asterias	4				
82.371	asterias	1	toad crab	1		
82.392	asterias	1				
82.394	asterias	1				
82.406	toad crab	1	asterias	1		
82.41	asterias	2				
82.417	asterias	3				
82.436	asterias	1				
82.466	redfish	1				
82.477	asterias	1				
82.493	asterias	1				
82.501	asterias	1				
82.524	snow crab	1				
82.543	toad crab	1				
82.579	asterias	1				
82.6	asterias	1				
82.602	asterias	1				
82.617	asterias	3				
82.652	sea cucumber	1				
82.653	asterias	1				
82.663	sea cucumber	1				
82.679	asterias	1				
82.69	asterias	2				
82.703	asterias	1				
82.712	asterias	1				
82.731	asterias	1				
82.75	sea cucumber	1				
82.761	sea cucumber	1				
82.772	asterias	1				
82.789	asterias	1	asterias	1		
82.794	redfish	1				
82.916	asterias	1				
82.928	sea cucumber	1				
82.931	asterias	10				
82.98	asterias	4				
82.983	asterias	1				
82.99	asterias	4				
82.992	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
82.998	asterias	3				
83.001	sea cucumber	1				
83.029	asterias	1				
83.057	asterias	3				
83.064	sea cucumber	1				
83.076	northern red anemone	1				
83.106	sea cucumber	1				
83.137	asterias	3				
83.148	asterias	1				
83.159	sea cucumber	1				
83.166	snow crab	1				
83.169	asterias	1				
83.175	asterias	1				
83.219	asterias	1				
83.237	toad crab	1				
83.257	asterias	1				
83.26	asterias	2				
83.267	asterias	2				
83.291	asterias	1	sea cucumber	1		
83.295	asterias	1				
83.323	asterias	1				
83.345	sunstar	1				
83.374	asterias	2				
83.387	asterias	1	asterias	1		
83.391	asterias	1				
83.398	asterias	1				
83.471	asterias	10				
83.479	sea cucumber	1				
83.489	asterias	5				
83.5	asterias	1				
83.559	sea cucumber	1				
83.57	asterias	4				
83.585	snow crab	1				
83.59	asterias	1				
83.622	asterias	1				
83.632	asterias	1				
83.654	asterias	2				
83.658	asterias	1				
83.663	asterias	1				
83.673	asterias	1				
83.708	toad crab	1	asterias	1		
83.714	asterias	2				
83.732	asterias	1	asterias	1		
83.744	asterias	3				
83.753	snow crab	1				
83.774	redfish	1				
83.777	asterias	4				
83.791	asterias	1				
83.8	asterias	1				
83.823	sea cucumber	1				
83.862	sea cucumber	1				
83.863	asterias	1				
83.87	asterias	1				
83.879	asterias	3				
83.936	asterias	4				
83.987	asterias	1				
83.989	asterias	1				
84.012	asterias	1				
84.021	sea cucumber	1				
84.025	asterias	1				
84.036	asterias	1				
84.041	asterias	1				
84.05	sea cucumber	1				
84.058	asterias	1				
84.076	asterias	1				
84.084	sea cucumber	1				
84.094	northern red anemone	1				
84.112	asterias	4				
84.117	sea cucumber	1				
84.119	asterias	1				
84.146	northern red anemone	1				
84.172	northern red anemone	1				
84.181	northern red anemone	1				
84.238	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
84.291	asterias	1				
84.312	asterias	1				
84.345	redfish	1				
84.346	asterias	1				
84.384	asterias	1				
84.429	asterias	1				
84.443	redfish	1				
84.477	asterias	1				
84.482	snow crab	1				
84.499	asterias	3				
84.511	asterias	2				
84.55	asterias	3				
84.588	asterias	3				
84.615	asterias	2				
84.633	asterias	1				
84.639	toad crab	1				
84.664	asterias	1				
84.647	northern red anemone	1				
84.703	sunstar	1				
84.719	asterias	1				
84.373	asterias	2				
84.8	asterias	2	toad crab	1		
84.801	sea cucumber	1				
84.813	asterias	3				
84.816	asterias	2				
84.823	asterias	1				
84.855	asterias	1				
84.875	asterias	4				
84.805	asterias	1				
84.921	asterias	1				
84.911	asterias	1				
84.952	asterias	1				
84.996	northern red anemone	1				
85.008	asterias	1				
85.038	asterias	1				
85.054	asterias	1				
85.059	sea cucumber	1				
85.064	asterias	1				
85.085	asterias	1				
85.13	asterias	1				
85.152	asterias	1				
85.162	asterias	1				
85.17	sea cucumber	1				
85.209	asterias	1				
85.229	asterias	1				
85.233	sea cucumber	1				
85.259	asterias	1				
85.29	asterias	2				
85.299	asterias	1				
88.665	asterias	1				
88.691	asterias	1				
88.718	asterias	1				
88.719	redfish	1				
88.754	asterias	1				
88.808	asterias	1				
88.913	asterias	1				
88.917	toad crab	1				
88.944	toad crab	1				
88.949	sunstar	1				
88.975	asterias	2				
88.999	asterias	1				
89.003	northern red anemone	1				
89.05	asterias	1				
89.057	asterias	1				
89.065	asterias	1				
89.093	asterias	1				
89.11	asterias	1				
89.116	asterias	2				
89.125	asterias	1				
89.126	asterias	1				
89.134	asterias	1				
89.143	asterias	1				
89.16	asterias	2				
89.178	asterias	2				

KP	Fauna	#	Fauna	#	Fauna	#
89.19	sunstar	1				
89.222	asterias	1				
89.238	asterias	1				
89.248	asterias	1				
89.251	asterias	1				
89.289	asterias	1				
89.304	asterias	1				
89.314	asterias	1				
89.345	asterias	1				
89.367	asterias	1				
89.379	asterias	1				
89.416	asterias	1				
89.424	asterias	1				
89.442	asterias	1				
89.448	toad crab	1				
89.46	asterias	2				
89.472	asterias	1				
89.477	toad crab	1	sunstar	1		
89.485	asterias	1				
89.49	asterias	1				
89.505	asterias	1				
89.53	asterias	1				
89.533	toad crab	1				
89.566	asterias	1				
89.588	asterias	1				
89.628	asterias	1				
89.632	asterias	1				
89.637	sunstar	1				
89.654	asterias	1				
89.622	asterias	1				
89.671	asterias	1				
89.673	asterias	1				
89.709	asterias	1				
89.716	asterias	1				
89.724	asterias	1				
89.735	redfish	1				
89.756	toad crab	1	asterias	1		
89.782	asterias	1				
89.788	asterias	1				
89.799	asterias	1				
89.81	asterias	2				
89.812	sea cucumber	1				
89.823	asterias	1				
89.835	sea cucumber	1				
89.853	asterias	1				
89.942	asterias	1				
89.952	asterias	1				
89.953	asterias	2				
89.971	asterias	1				
89.983	toad crab	1				
89.999	asterias	1				
90.009	asterias	2				
90.014	sea cucumber	1				
90.023	asterias	1				
90.031	toad crab	1				
90.065	asterias	1				
90.073	asterias	2				
90.088	asterias	2				
90.102	asterias	3				
90.114	asterias	1				
90.131	asterias	1				
90.164	asterias	1				
90.214	asterias	2				
90.228	asterias	1				
90.23	asterias	1				
90.266	asterias	2				
90.268	asterias	1				
90.274	asterias	1				
90.283	asterias	2				
90.297	asterias	2				
90.305	asterias	1				
90.376	asterias	1				
90.387	asterias	1				
90.388	snow crab	1				

KP	Fauna	#	Fauna	#	Fauna	#
90.421	asterias	1				
90.432	asterias	2				
90.437	asterias	2				
90.443	asterias	1				
90.454	asterias	1				
90.489	asterias	2				
90.514	asterias	1				
90.536	asterias	1				
90.556	asterias	2				
90.636	asterias	1				
90.642	asterias	2				
90.682	asterias	1				
90.684	asterias	1				
90.699	asterias	2				
90.702	asterias	1				
90.719	asterias	1				
90.729	sunstar	1				
90.748	asterias	1				
90.798	asterias	1				
90.801	sunstar	1				
90.82	asterias	1				
90.826	asterias	1				
90.846	redfish	1				
90.895	sea cucumber	1				
90.904	asterias	1				
90.912	asterias	1				
90.926	asterias	1				
90.934	asterias	1				
90.953	asterias	1				
91.022	sunstar	1				
91.036	asterias	1	sea cucumber	1		
91.042	toad crab	1				
91.049	toad crab	1				
91.05	asterias	1				
91.052	asterias	1				
91.068	toad crab	1				
91.077	asterias	1				
91.123	asterias	2				
91.134	toad crab	2				
91.146	asterias	1				
91.177	eel	1				
91.208	toad crab	1				
91.222	asterias	1				
91.256	asterias	1				
91.269	asterias	1				
91.307	asterias	1				
91.354	asterias	1				
91.378	asterias	1				
91.387	asterias	1				
91.408	asterias	2				
91.417	asterias	1				
91.525	asterias	1				
91.536	asterias	1				
91.548	asterias	1				
91.566	asterias	1				
91.568	redfish	1				
91.579	asterias	1				
91.588	asterias	1				
91.636	asterias	1				
91.666	asterias	1				
91.676	asterias	1				
91.695	asterias	1				
91.704	asterias	2				
91.712	asterias	1	northern red anemone	1		
91.721	asterias	1				
91.725	asterias	2				
91.733	asterias	1				
91.734	roundnose grenadier	1				
91.74	asterias	1				
91.789	asterias	1	redfish	1		
91.81	asterias	2				
91.821	asterias	4				
91.84	asterias	1				
91.842	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
91.846	asterias	1				
91.87	sunstar	1	asterias	1		
91.876	sunstar	1				
91.881	asterias	2				
91.888	asterias	1				
91.897	asterias	1				
91.9	toad crab	1				
91.906	asterias	1				
91.916	asterias	1				
91.926	asterias	1				
91.93	asterias	2				
91.941	asterias	1				
91.956	sunstar	1				
91.97	asterias	1				
91.977	asterias	1				
92.001	asterias	1				
92.006	asterias	1				
92.027	asterias	1	sunstar	1		
92.029	sunstar	1				
92.04	asterias	1				
92.042	asterias	2				
92.085	sea cucumber	1				
92.156	northern red anemone	1				
92.163	eel	1				
92.164	asterias	1				
92.207	asterias	1				
92.225	asterias	1				
92.235	sea cucumber	1				
92.239	sea cucumber	1	asterias	2		
92.246	asterias	1				
92.273	asterias	1				
92.285	asterias	1				
92.294	asterias	1				
92.297	asterias	1				
92.3	asterias	1	asterias	1		
92.306	asterias	1				
92.313	asterias	1				
92.316	asterias	1				
92.319	asterias	2				
92.321	asterias	1				
92.322	sea cucumber	1				
92.334	asterias	1				
92.34	asterias	3				
92.35	asterias	1				
92.356	asterias	1				
92.363	asterias	1				
92.37	asterias	2				
92.377	snow crab	1				
92.384	toad crab	1				
92.39	asterias	1				
92.395	snow crab	1				
92.398	snow crab	1				
92.405	asterias	1				
92.408	asterias	1				
92.412	asterias	1				
92.421	asterias	1				
92.43	asterias	1				
92.431	sunstar	1				
92.432	asterias	1				
92.436	asterias	1				
92.438	Jonah crab	1				
92.461	asterias	1				
92.468	sunstar	1				
92.481	asterias	1				
92.49	asterias	1				
92.501	asterias	1				
92.505	asterias	1				
92.507	asterias	1				
92.526	asterias	1				
92.547	sea cucumber	1				
92.589	sea cucumber	1				
92.602	asterias	1				
92.623	asterias	1				
92.659	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
92.666	asterias	3				
92.669	toad crab	1				
92.686	sunstar	1				
92.695	northern red anemone	1				
92.701	asterias	1				
92.722	asterias	4				
92.724	asterias	1				
92.772	asterias	1				
92.774	sunstar	2	asterias	1		
92.776	asterias	1				
92.791	asterias	2				
92.8	asterias	1	sunstar	1		
92.808	asterias	1				
92.817	sunstar	2				
92.822	asterias	1				
92.825	sunstar	1	asterias	1		
92.848	asterias	1				
92.853	asterias	2	asterias	1		
92.857	asterias	1				
92.859	asterias	1				
92.872	asterias	1				
92.877	asterias	1	sunstar	1		
92.893	asterias	1				
92.898	asterias	1				
92.907	sunstar	1				
92.927	northern red anemone	1				
92.943	northern red anemone	1				
92.952	sunstar	1				
92.977	northern red anemone	1				
92.985	asterias	1	sea cucumber	1		
92.992	northern red anemone	1				
93.001	toad crab	1				
93.007	asterias	1				
93.009	asterias	1				
93.018	asterias	1				
93.022	sea cucumber	1				
93.053	asterias	1				
93.059	sea cucumber	1				
93.064	sea cucumber	1				
93.078	sea cucumber	1				
93.079	asterias	1				
93.081	asterias	1				
93.082	cod	1				
93.096	sunstar	1				
93.101	asterias	1				
93.109	sea cucumber	1				
93.123	toad crab	1				
93.13	asterias	1				
93.135	sea cucumber	1				
93.145	sunstar	1				
93.158	asterias	1	sea cucumber	1		
93.165	asterias	2				
93.168	asterias	1				
93.17	sea cucumber	1				
93.176	sunstar	1				
93.183	asterias	1				
93.189	asterias	1				
93.189	sea cucumber	1				
93.196	asterias	1				
93.218	asterias	1				
93.227	sea cucumber	1				
93.235	asterias	1				
93.248	sea cucumber	1				
93.26	asterias	1	sea cucumber	1		
93.265	asterias	1				
93.266	sea cucumber	1				
93.28	sea cucumber	1				
93.286	asterias	1				
93.295	asterias	1				
93.326	sea cucumber	1				
93.332	asterias	1				
93.338	asterias	1				
93.364	asterias	1				
93.57	sunstar	1				

KP	Fauna	#	Fauna	#	Fauna	#
93.377	asterias	1				
93.403	asterias	1				
93.434	asterias	1				
93.437	asterias	1				
93.508	snow crab	1	asterias	1		
93.529	sculpin	1				
93.55	asterias	1				
93.646	sea cucumber	1				
93.683	asterias	1				
93.691	sea cucumber	1				
93.702	asterias	1				
93.703	asterias	1				
93.72	asterias	1				
93.74	asterias	1				
93.745	northern red anemone	1				
93.748	asterias	1				
93.761	asterias	1				
93.816	asterias	1				
93.82	asterias	1				
93.855	sea cucumber	1				
93.858	asterias	1				
93.872	sea cucumber	1				
93.885	asterias	1				
93.928	sea cucumber	1				
93.94	sea cucumber	1				
93.955	asterias	1				
93.976	asterias	1	sea cucumber	1		
93.994	asterias	1				
94.014	asterias	1				
94.033	sea cucumber	1				
94.061	sea cucumber	1				
94.071	northern red anemone	1	asterias	1		
94.086	sea cucumber	1				
94.105	sea cucumber	1				
94.119	sea cucumber	1				
94.168	northern red anemone	2				
94.198	sea cucumber	1				
94.219	sea cucumber	1				
94.233	sea cucumber	1				
94.236	asterias	2				
94.25	asterias	1				
94.254	asterias	1	sea cucumber	1		
94.26	asterias	1				
94.268	sea cucumber	1				
94.292	northern red anemone	1				
94.312	asterias	1				
94.313	asterias	1				
94.326	northern red anemone	1				
94.328	northern red anemone	1				
94.337	asterias	1				
94.357	asterias	1				
94.571	sea cucumber	1				
94.388	sea cucumber	1				
94.395	sea cucumber	1				
94.401	northern red anemone	1				
94.412	sea cucumber	1				
94.441	sea cucumber	1	redfish	1		
94.445	asterias	1				
94.459	asterias	1				
94.465	asterias	1				
94.493	asterias	1				
94.514	asterias	1				
94.52	asterias	1				
94.567	sea cucumber	1				
94.582	asterias	1				
94.627	sea cucumber	1				
94.652	northern red anemone	1				
94.654	asterias	1				
94.708	asterias	1				
94.714	northern red anemone	1				
94.723	asterias	1	toad crab	1		
94.763	asterias	1				
94.779	asterias	1				
94.786	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
94.804	sea cucumber	1				
94.92	asterias	1				
94.923	sea cucumber	1				
94.938	asterias	1				
94.943	asterias	1				
94.956	asterias	1				
95.004	northern red anemone	1				
95.01	toad crab	1				
95.03	asterias	1				
95.045	asterias	1				
95.053	toad crab	1				
95.043	asterias	1				
95.095	asterias	1				
95.114	asterias	1				
95.126	sea cucumber	1				
95.136	sea cucumber	1				
95.144	asterias	2				
95.165	asterias	1				
95.188	sea cucumber	1				
95.208	asterias	1				
95.256	sea cucumber	1				
95.264	sea cucumber	1				
94.284	sea cucumber	1				
94.303	asterias	1				
94.321	cod	1				
94.327	snow crab	1				
94.353	sea cucumber	1				
94.358	sea cucumber	1				
94.401	sea cucumber	1				
94.424	sea cucumber	1				
94.435	toad crab	1				
94.447	toad crab	1				
94.455	toad crab	1				
94.459	sea cucumber	1				
94.463	asterias	1				
94.465	asterias	1				
94.482	sea cucumber	1				
94.494	asterias	1				
94.505	asterias	1				
94.543	sea cucumber	1				
95.549	sea cucumber	1				
95.55	asterias	2				
95.576	sea cucumber	1				
95.611	Jonah crab	1				
95.615	asterias	1				
95.631	sea cucumber	1				
95.637	sea cucumber	1				
95.642	asterias	1				
95.643	sea cucumber	2				
95.683	sea cucumber	1				
95.692	sea cucumber	1				
95.724	asterias	1				
95.725	asterias	1				
95.738	sea cucumber	1				
95.755	northern red anemone	1				
95.76	sea cucumber	1	asterias	1		
95.768	sea cucumber	3				
95.778	sea cucumber	1	asterias	1		
95.795	sea cucumber	1				
95.865	sea cucumber	1				
95.908	asterias	1				
95.95	sea cucumber	1				
95.968	sea cucumber	2				
95.97	asterias	1				
95.972	sea cucumber	1				
95.991	cod	1				
96.029	asterias	1				
96.04	asterias	1				
96.078	sea cucumber	3				
96.082	toad crab	1				
96.086	sea cucumber	1				
96.099	sea cucumber	1				
96.101	sea cucumber	1				
96.107	sea cucumber	2				

KP	Fauna	#	Fauna	#	Fauna	#
96.114	sea cucumber	2				
96.124	sea cucumber	1				
96.146	sea cucumber	3				
96.156	sea cucumber	1				
96.163	sea cucumber	1				
96.164	sea cucumber	1				
96.172	sea cucumber	2				
96.177	sea cucumber	2				
96.193	asterias	1				
96.211	haddock	1				
96.238	sea cucumber	1				
96.24	sea cucumber	1	asterias	1		
96.26	Jonah crab	1				
96.261	sea cucumber	1				
96.265	asterias	1				
96.27	snow crab	1				
96.278	sea cucumber	1				
96.281	sea cucumber	2				
96.298	sea cucumber	1				
96.312	sea cucumber	2				
96.322	sea cucumber	1				
96.333	asterias	1				
96.339	toad crab	1				
96.341	toad crab	1				
96.348	haddock	1				
96.355	toad crab	1				
96.356	toad crab	1				
96.372	toad crab	2				
96.389	toad crab	1				
96.394	sea cucumber	2				
96.401	sea cucumber	2				
96.445	toad crab	1				
96.456	sea cucumber	2				
96.47	asterias	1				
96.471	sea cucumber	1				
96.473	sea cucumber	1				
96.485	sea cucumber	2				
96.504	haddock	1				
96.506	asterias	1				
96.513	sea cucumber	1				
96.554	sea cucumber	1				
96.587	asterias	1				
96.612	sea cucumber	1				
96.644	sea cucumber	2				
96.647	sea cucumber	1				
96.658	sea cucumber	1				
96.659	sea cucumber	1				
96.672	sea cucumber	2				
96.688	sea cucumber	1				
96.698	toad crab	2				
96.712	toad crab	1				
96.719	asterias	1				
96.728	sea cucumber	1				
96.729	asterias	1				
96.736	sea cucumber	1				
96.752	asterias	1				
96.758	sea cucumber	1				
96.78	sea cucumber	1	toad crab	1		
96.815	sea cucumber	1				
96.827	asterias	1	sea cucumber	1		
96.844	wolfish	1				
96.848	asterias	1				
96.861	asterias	1				
96.878	sea cucumber	1				
96.882	snow crab	1				
96.898	toad crab	1				
96.964	asterias	1				
96.976	toad crab	1				
97.004	sea cucumber	1				
97.006	toad crab	1				
97.047	northern red anemone	1	sea cucumber	1		
97.073	sea cucumber	2				
97.09	cod	1				
97.106	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
97.108	asterias	1				
97.163	toad crab	1	sea cucumber	1		
97.186	snow crab	1				
79.187	asterias	1				
97.196	asterias	1				
97.2	toad crab	1				
97.217	sea cucumber	1				
97.222	sea cucumber	1				
97.243	asterias	1				
97.259	asterias	1				
97.26	cod	1				
97.282	snow crab	1				
97.316	asterias	1				
97.343	sea cucumber	2				
97.355	sea cucumber	1				
97.36	toad crab	1				
97.363	sea cucumber	2				
97.367	sea cucumber	1				
97.378	sea cucumber	1				
97.381	sea cucumber	1				
97.385	sea cucumber	1				
97.404	sea cucumber	1				
97.408	sea cucumber	1				
97.409	sea cucumber	1				
97.414	sea cucumber	1				
97.423	sea cucumber	2	redfish	1		
97.426	sea cucumber	1				
97.432	sea cucumber	1				
97.434	sea cucumber	1				
97.438	sea cucumber	5				
97.441	sea cucumber	5				
97.459	sea cucumber	2				
97.462	sea cucumber	2	northern red anemone	1		
97.464	northern red anemone	1	sea cucumber	1		
97.47	sea cucumber	3				
97.473	sea cucumber	2				
97.483	sea cucumber	2				
97.484	sea cucumber	1				
97.493	sea cucumber	2				
97.496	sea cucumber	1				
97.504	sea cucumber	1				
97.509	sea cucumber	1				
97.514	sea cucumber	2	northern red anemone	1		
97.528	sea cucumber	1				
97.534	sea cucumber	1				
97.538	asterias	1				
97.543	sea cucumber	2				
97.55	sea cucumber	2				
97.552	asterias	1				
97.562	sea cucumber	2				
97.564	snow crab	1				
97.565	sea cucumber	1				
97.59	asterias	1				
97.594	sea cucumber	1				
97.597	sea cucumber	1				
97.601	sea cucumber	3				
97.613	sea cucumber	2				
97.619	sea cucumber	1				
97.624	sea cucumber	1				
97.63	asterias	1				
97.638	sea cucumber	1				
97.653	sea cucumber	1				
97.655	sea cucumber	2				
97.657	northern red anemone	1				
97.665	asterias	1				
97.672	sea cucumber	1				
97.679	snow crab	1				
97.698	sea cucumber	1				
97.721	sea cucumber	1				
97.747	sea cucumber	1				
97.748	northern red anemone	1				
97.78	toad crab	1				
97.793	sea cucumber	1				
97.797	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
97.825	cod	1				
97.857	northern red anemone	1				
97.894	sea cucumber	1				
97.899	sea cucumber	1				
97.919	sea cucumber	1				
97.929	sea cucumber	2				
97.952	sea cucumber	3				
97.971	snow crab	1				
97.993	toad crab	1				
98.036	asterias	1				
98.04	northern red anemone	1				
98.093	asterias	1				
98.099	asterias	1				
98.105	asterias	1				
98.11	redfish	1				
98.117	sea cucumber	1				
98.135	toad crab	1				
98.14	asterias	1				
98.163	asterias	1				
98.184	asterias	1				
98.206	toad crab	1				
98.214	asterias	1				
98.22	asterias	1				
98.237	asterias	1				
98.246	asterias	1				
98.255	asterias	1				
98.267	asterias	1				
98.314	asterias	1				
98.366	asterias	1				
98.378	asterias	1				
98.438	toad crab	1				
98.448	asterias	1				
98.457	asterias	1				
98.482	asterias	1				
98.53	toad crab	1				
98.55	asterias	1				
98.553	toad crab	1				
98.653	asterias	1				
98.667	asterias	2				
98.677	asterias	1				
98.688	asterias	1				
98.695	asterias	1				
98.696	asterias	1				
98.78	asterias	1				
98.799	cod	1				
98.805	asterias	1				
98.826	eel	1				
98.834	asterias	2				
98.888	snow crab	1				
98.897	asterias	1				
98.973	asterias	1				
99.001	asterias	1				
99.03	asterias	1	eel	1		
99.06	toad crab	1				
99.065	asterias	1				
99.074	eel	1				
99.076	asterias	1				
99.086	asterias	1				
99.109	asterias	1				
99.139	asterias	2				
99.163	asterias	3				
99.275	asterias	1				
99.285	asterias	1				
99.351	asterias	1				
99.354	haddock	1				
99.409	asterias	1				
99.436	asterias	1				
99.474	eel	1				
99.477	asterias	1				
99.487	asterias	1				
99.49	asterias	1				
99.5	asterias	1				
99.54	asterias	1				
99.527	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
99.538	asterias	1				
99.548	asterias	1				
99.57	snow crab	1				
99.581	cod	2	toad crab	1		
99.621	asterias	1				
99.654	asterias	1				
99.709	toad crab	2				
99.729	flatfish	1				
99.753	asterias	1				
99.777	asterias	1				
99.816	sea cucumber	1				
99.841	asterias	1				
99.861	asterias	1				
99.878	sea cucumber	1				
99.939	northern red anemone	1				
99.945	sea cucumber	1				
99.946	northern red anemone	1				
99.948	asterias	1				
99.949	asterias	1				
99.95	eel	1				
99.961	asterias	1				
99.979	cod	1				
100.013	wolffish	1				
100.018	asterias	2				
100.019	toad crab	1				
100.032	sea cucumber	1				
100.033	asterias	1				
100.036	sea cucumber	1				
100.05	asterias	1				
100.058	asterias	1				
100.08	toad crab	1				
100.082	Jonah crab	1	snow crab	1		
100.084	asterias	1				
100.1	sea cucumber	1				
100.111	asterias	1				
100.12	asterias	1				
100.141	asterias	1				
100.15	haddock	1				
100.166	asterias	2	sea cucumber	1		
100.176	asterias	1				
100.183	asterias	1				
100.192	asterias	1				
100.207	cod	1				
100.205	sea cucumber	1				
100.225	asterias	1	sea cucumber	1		
100.23	sea cucumber	1				
100.252	cod	1				
100.261	asterias	2				
100.278	sea cucumber	1				
100.282	sea cucumber	1				
100.305	sea cucumber	1				
100.307	asterias	1				
100.366	asterias	1				
100.374	sea cucumber	1				
100.385	cod	1				
100.394	asterias	1				
100.398	asterias	1				
100.408	eel	1				
100.424	asterias	2				
100.429	asterias	2	sea cucumber	1		
100.438	sea cucumber	2				
100.456	sea cucumber	1				
100.462	asterias	1				
100.466	sea cucumber	1				
100.491	asterias	1				
100.509	asterias	1				
100.51	sea cucumber	1				
100.516	asterias	2				
100.52	asterias	1				
100.523	asterias	1				
100.539	toad crab	1				
100.549	sea cucumber	1				
100.573	sea cucumber	3				
100.586	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
100.599	asterias	1				
100.606	sea cucumber	1				
100.608	toad crab	1				
100.613	sea cucumber	1				
100.622	asterias	1				
100.631	sea cucumber	1				
100.622	asterias	1				
100.631	asterias	1				
100.644	asterias	1				
100.649	asterias	1				
100.654	asterias	1				
100.667	asterias	2				
100.718	asterias	1	sea cucumber	1	eel	1
100.725	asterias	1				
100.742	asterias	1				
100.751	sea cucumber	1				
100.756	asterias	1				
100.761	sea cucumber	1				
100.782	asterias	1				
100.785	asterias	1				
100.794	sea cucumber	1				
100.804	asterias	2				
100.816	asterias	2				
100.826	sea cucumber	1				
100.838	sea cucumber	1				
100.844	asterias	1				
100.848	asterias	1				
100.853	asterias	1				
100.862	asterias	1				
100.871	asterias	3				
100.895	sea cucumber	2	toad crab	1		
100.903	asterias	1				
100.912	asterias	1				
100.929	sea cucumber	1				
100.94	asterias	1				
100.956	asterias	1				
100.99	sea cucumber	1				
101.011	cod	1				
101.017	asterias	2				
101.032	sea cucumber	1				
101.039	asterias	1				
101.053	asterias	1				
101.088	toad crab	1	eel	3		
101.098	sea cucumber	1				
101.101	sea cucumber	1				
101.114	eel	1				
101.119	sea cucumber	1				
101.14	sea cucumber	1	asterias	1		
101.174	sea cucumber	1				
101.167	toad crab	2				
101.208	sea cucumber	1				
101.227	asterias	1	asterias	1		
101.236	asterias	1				
101.242	asterias	3				
101.267	sea cucumber	1				
101.285	asterias	2				
101.288	asterias	1				
101.295	asterias	1				
101.298	asterias	1	eel	1		
101.303	Jonah crab	1	asterias	1		
101.306	asterias	1				
101.314	sea cucumber	1	asterias	1		
101.316	asterias	2				
101.345	asterias	1				
101.356	asterias	1				
101.358	asterias	1				
101.391	asterias	1				
101.392	asterias	1				
101.401	asterias	1				
101.403	asterias	1				
101.41	asterias	1				
101.412	asterias	1				
101.422	asterias	3				
101.427	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
101.44	asterias	1	redfish	1		
101.457	asterias	2				
101.459	asterias	2				
101.475	asterias	1				
101.499	cod	1				
101.508	asterias	1				
101.529	sea cucumber	1				
101.549	asterias	5				
101.555	asterias	1				
101.574	asterias	1				
101.587	asterias	1				
101.614	asterias	1				
101.616	asterias	2				
101.622	asterias	4				
101.624	asterias	1				
101.639	asterias	1				
101.342	haddock	1				
101.663	asterias	2				
101.672	cod	1				
101.689	asterias	1				
101.695	asterias	1				
101.697	asterias	1				
101.7	asterias	2				
101.701	asterias	1	sea cucumber	1		
101.718	sea cucumber	1				
101.724	asterias	2	pollock	1		
101.736	asterias	1				
101.74	asterias	2				
101.748	asterias	2				
101.759	asterias	1				
101.761	asterias	1				
101.768	asterias	2				
101.77	asterias	2				
101.775	asterias	1				
101.784	asterias	2				
101.789	asterias	1				
101.797	toad crab	1				
101.876	asterias	1				
101.834	asterias	1				
101.838	asterias	1				
101.861	asterias	1				
101.872	asterias	1				
101.878	asterias	1				
101.89	asterias	1				
101.893	sea cucumber	1				
101.899	asterias	1				
101.92	asterias	1				
101.926	asterias	2				
101.933	sunstar	1				
101.934	asterias	1				
101.937	asterias	1				
101.944	asterias	2				
101.946	asterias	1				
101.948	sea cucumber	1				
101.954	eel	1				
101.979	asterias	2				
101.993	asterias	2				
102.007	asterias	3				
102.026	asterias	1				
102.028	asterias	1	sea cucumber	1		
102.044	asterias	2				
102.046	sea cucumber	1				
102.048	snow crab	1				
102.071	sea cucumber	1				
102.098	sea cucumber	1				
102.118	sea cucumber	1				
102.12	sea cucumber	1				
102.133	sea cucumber	1				
102.141	sea cucumber	1	asterias	1		
102.145	sea cucumber	1				
102.149	sea cucumber	6				
102.151	sea cucumber	3				
102.152	sea cucumber	2				
102.154	sea cucumber	2				

KP	Fauna	#	Fauna	#	Fauna	#
102.155	sea cucumber	1				
102.157	northern red anemone	1				
102.164	sea cucumber	2				
102.165	asterias	1				
102.167	sea cucumber	1				
102.173	asterias	1				
102.175	sea cucumber	1				
102.179	sea cucumber	1				
102.185	sea cucumber	1				
102.188	sea cucumber	1				
102.194	sea cucumber	1				
102.2	sea cucumber	1				
102.203	sea cucumber	1				
102.208	sea cucumber	1				
102.209	sea cucumber	1				
102.215	sea cucumber	3				
102.222	sea cucumber	4				
102.233	sea cucumber	1				
102.226	asterias	3				
102.227	asterias	1				
102.231	sea cucumber	1				
102.233	sea cucumber	1				
102.239	sea cucumber	2				
102.24	sea cucumber	3				
102.243	sea cucumber	3				
102.25	sea cucumber	2				
102.251	sea cucumber	1				
102.253	sea cucumber	1	northern red anemone	1		
102.256	sea cucumber	5				
102.257	sea cucumber	2				
102.259	sea cucumber	1				
102.261	sea cucumber	1				
102.263	asterias	1				
102.265	sea cucumber	1				
102.267	sea cucumber	2				
102.27	sea cucumber	4	asterias	1	northern red anemone	1
102.274	sea cucumber	1				
102.277	sea cucumber	3				
102.288	sea cucumber	3	northern red anemone	1		
102.29	sea cucumber	2				
102.294	sea cucumber	2	northern red anemone	1		
102.296	sea cucumber	6	northern red anemone	1	asterias	1
102.3	sea cucumber	3	northern red anemone	3		
102.303	asterias	1	northern red anemone	1		
102.308	northern red anemone	1	sea cucumber	1		
102.31	sea cucumber	2				
102.314	sea cucumber	1	northern red anemone	1		
102.317	sea cucumber	5	northern red anemone	2		
102.318	sea cucumber	5				
102.322	sea cucumber	12				
102.325	sea cucumber	7				
102.327	sea cucumber	6				
102.33	sea cucumber	2	northern red anemone	1		
102.333	asterias	1	sea cucumber	1		
102.343	sea cucumber	3				
102.346	asterias	2	sea cucumber	1		
102.349	sea cucumber	9	asterias	1		
102.353	sea cucumber	10	asterias	1		
102.355	sea cucumber	6	asterias	1	northern red anemone	1
102.359	sea cucumber	11	asterias	1	northern red anemone	2
102.362	sea cucumber	6				
102.365	sea cucumber	7				
102.368	northern red anemone	1	asterias	1		
102.37	sea cucumber	2				
102.372	northern red anemone	6				
102.374	northern red anemone	3				
102.376	northern red anemone	18				
102.377	northern red anemone	6	sea cucumber	4		
102.381	northern red anemone	4	sea cucumber	4		
102.386	asterias	2				
102.39	northern red anemone	2	sea cucumber	4		
102.392	sea cucumber	11	northern red anemone	1		
102.395	sea cucumber	5				
102.397	sea cucumber	2				

KP	Fauna	#	Fauna	#	Fauna	#
102.401	sea cucumber	2				
102.403	asterias	1				
102.404	sea cucumber	2				
102.406	asterias	1				
102.407	sea cucumber	2				
102.409	northern red anemone	1	sea cucumber	2		
102.413	sea cucumber	13	northern red anemone	3		
102.416	sea cucumber	13	northern red anemone	1		
102.419	sea cucumber	6	cod			
102.42	northern red anemone	1				
102.423	sea cucumber	1				
102.423	northern red anemone	1				
102.426	sea cucumber	2				
102.426	sea cucumber	1				
102.43	sea cucumber	19	northern red anemone	3		
102.434	sea cucumber	23	northern red anemone	2	asterias	1
102.436	sea cucumber	3				
102.439	asterias	2				
102.446	sea cucumber	2				
102.448	sea cucumber	2				
102.451	sea cucumber	4				
102.459	asterias	1				
102.461	asterias	1				
102.462	sea cucumber	2				
102.464	sea cucumber	1				
102.467	sea cucumber	6				
102.47	sea cucumber	2	northern red anemone	1		
102.478	sea cucumber	30	northern red anemone	1		
102.48	sea cucumber	8				
102.484	sea cucumber	13				
102.485	sea cucumber	8	northern red anemone	1		
102.492	sea cucumber	20	northern red anemone	2		
102.446	sea cucumber	3				
102.497	snow crab	1				
102.503	sea cucumber	40				
102.504	northern red anemone	3				
102.506	sea cucumber	10	northern red anemone	1		
102.507	sea cucumber	7	northern red anemone	1		
102.514	sea cucumber	39				
102.518	asterias	1				
102.52	fish	1	asterias	1		
102.523	asterias	1				
102.529	sea cucumber	3				
102.531	sea cucumber	5	asterias	2		
102.536	sea cucumber	6	asterias	1		
102.537	sea cucumber	6				
102.539	sea cucumber	11	asterias	1		
102.54	sea cucumber	1				
102.544	sea cucumber	2				
102.548	northern red anemone	1				
102.548	sea cucumber	23	northern red anemone	1		
102.553	sea cucumber	6				
102.559	sea cucumber	1	asterias	1		
102.567	sea cucumber	9				
102.569	sea cucumber	1				
102.572	sea cucumber	5				
102.578	sea cucumber	1				
102.581	asterias	1				
102.584	sea cucumber	1				
102.585	asterias	1				
102.587	sea cucumber	1				
102.589	sea cucumber	1				
102.594	sea cucumber	8				
102.598	sea cucumber	13	northern red anemone	1		
102.601	sea cucumber	25				
102.602	northern red anemone	1				
102.604	sea cucumber	15				
102.607	sea cucumber	12				
102.612	sea cucumber	28	northern red anemone	2		
102.618	sea cucumber	51	northern red anemone	1		
102.622	sea cucumber	11				
102.624	sea cucumber	2				
102.625	sea cucumber	2				
102.626	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
102.63	sea cucumber	2				
102.633	sea cucumber	1				
102.638	sea cucumber	3				
102.639	sea cucumber	1				
102.646	sea cucumber	2				
102.649	sea cucumber	1				
102.652	sea cucumber	3				
102.667	sea cucumber	7	northern red anemone	1		
102.678	sea cucumber	46				
102.679	snow crab	1				
102.679	sea cucumber	1				
102.69	sea cucumber	55	northern red anemone	1		
102.691	sea cucumber	20	northern red anemone	1		
102.698	sea cucumber	25				
102.699	sea cucumber	1				
102.702	sea cucumber	1				
102.708	sea cucumber	1				
102.713	sea cucumber	13				
102.716	sea cucumber	13				
102.719	sea cucumber	25	northern red anemone	1		
102.726	sea cucumber	26	northern red anemone	1		
102.729	sea cucumber	9	asterias	2		
102.742	northern red anemone	1				
102.75	sea cucumber	102				
102.751	sea cucumber	1				
102.758	sea cucumber	1				
102.764	asterias	3				
102.767	sea cucumber	1				
102.771	sea cucumber	1	asterias	1		
102.782	sea cucumber	45	northern red anemone	1		
102.784	northern red anemone	1	sea cucumber	4		
102.79	sea cucumber	44				
102.793	cod	1	sea cucumber	2		
102.797	sea cucumber	6				
102.801	sea cucumber	6				
102.804	sea cucumber	10	asterias	2		
102.808	sea cucumber	26				
102.814	sea cucumber	52				
102.815	snow crab	1	asterias	1		
102.181	sea cucumber	1				
102.823	sea cucumber	4				
102.831	sea cucumber	22	snow crab	1		
102.832	asterias	3	sea cucumber	38		
102.842	sea cucumber	4				
102.845	northern red anemone	1				
102.853	sea cucumber	33				
102.856	sea cucumber	7	haddock	1	northern red anemone	4
102.86	sea cucumber	9				
102.861	sea cucumber	3	eel	1		
102.863	sea cucumber	5				
102.869	sea cucumber	36	Jonah crab	2		
102.872	sea cucumber	25	northern red anemone	1		
102.875	sea cucumber	9				
102.876	sea cucumber	9	northern red anemone	1		
102.884	sea cucumber	26	asterias	1		
102.888	sea cucumber	6	asterias	1		
102.889	sea cucumber	1				
102.892	asterias	1				
102.895	asterias	12	sea cucumber	1		
102.9	sea cucumber	16				
102.904	sea cucumber	3				
102.919	sea cucumber	42	northern red anemone	1		
102.922	sea cucumber	40	asterias	1		
102.928	sea cucumber	19	cod	2		
102.937	sea cucumber	3				
102.948	sea cucumber	40	snow crab	1	asterias	1
102.95	sea cucumber	5				
102.956	sea cucumber	1				
102.963	sea cucumber	33	asterias	2		
102.97	sea cucumber	8				
102.98	sea cucumber	23	asterias	2		
102.985	sea cucumber	19	northern red anemone	1		
102.906	asterias	1				
102.999	sea cucumber	99				

KP	Fauna	#	Fauna	#	Fauna	#
103.017	sea cucumber	15				
103.019	sea cucumber	3	asterias	1		
103.026	sea cucumber	25				
103.027	asterias	1	sea cucumber	10		
103.034	sea cucumber	45				
103.037	sea cucumber	8				
103.04	sea cucumber	11				
103.042	sea cucumber	3				
103.044	sea cucumber	4				
103.047	asterias	1				
103.057	sea cucumber	32	northern red anemone	1		
103.072	sea cucumber	88	cod	1	asterias	1
103.076	snow crab	1	sea cucumber	1		
103.082	sea cucumber	2				
103.087	sea cucumber	1				
103.1	asterias	1				
103.101	sea cucumber	1				
103.11	asterias	1				
103.114	asterias	2	sea cucumber	17		
103.116	sea cucumber	10				
103.117	sea cucumber	2				
103.126	sea cucumber	11				
103.3	asterias	2	sea cucumber	1		
103.132	sea cucumber	62	cod	2	northern red anemone	
103.145	sea cucumber	7	northern red anemone	42		
103.155	asterias	1				
103.156	sea cucumber	3				
103.157	sea cucumber	6				
103.166	sea cucumber	19	asterias	1		
103.178	sea cucumber	47				
103.181	sea cucumber	10	asterias	1		
103.186	sea cucumber	6	toad crab	1		
103.192	sea cucumber	43				
103.193	asterias	1				
103.205	sea cucumber	13				
103.212	sea cucumber	30	northern red anemone	1		
103.213	northern red anemone	1	sea cucumber	20	fish	
103.216	sea cucumber	1				
103.218	sea cucumber	6				
103.221	sea cucumber	5				
103.221	asterias	2				
103.232	sea cucumber	15				
103.239	sea cucumber	29				
103.241	sea cucumber	31				
103.25	northern red anemone	1				
103.252	northern red anemone	5				
103.255	sea cucumber	1				
103.259	sea cucumber	17	asterias	1		
103.26	northern red anemone	1	sea cucumber	24		
103.273	sea cucumber	3				
103.275	asterias	1				
103.281	sea cucumber	4				
103.284	asterias	1				
103.287	asterias	8				
103.3	sea cucumber	55	asterias	1		
103.3	sea cucumber	1	asterias	1		
103.306	sea cucumber	5				
103.307	rock	1	sea cucumber	4		
103.316	sea cucumber	60				
103.324	sea cucumber	45				
103.325	asterias	1				
103.332	sea cucumber	5				
103.339	sea cucumber	28				
103.342	sea cucumber	1				
103.351	sea cucumber	17	asterias	2		
103.353	sea cucumber	3	asterias	1		
103.36	eel	1	sea cucumber	1		
103.362	snow crab	1				
103.371	sea cucumber	46				
103.383	sea cucumber	12	asterias	1		
103.385	asterias	1	sea cucumber	9		
103.39	sea cucumber	11				
103.397	sea cucumber	51				
103.401	sea cucumber	13	cod	1		

KP	Fauna	#	Fauna	#	Fauna	#
103.404	sea cucumber	6	asterias	1		
103.406	sea cucumber	16	asterias	1		
103.414	sea cucumber	6	asterias	1		
103.42	sea cucumber	2	asterias	1		
103.429	sea cucumber	43				
103.436	sea cucumber	24				
103.441	sea cucumber	2				
103.444	sea cucumber	112	asterias	1	snow crab	1
103.451	sea cucumber	13	northern red anemone	1		
103.463	sea cucumber	60				
103.466	sea cucumber	10	northern red anemone	1		
103.469	sea cucumber	3	toad crab	1		
103.473	sea cucumber	3				
103.497	sea cucumber	88				
103.499	sea cucumber	1				
103.504	sea cucumber	3				
103.51	asterias	2				
103.523	sea cucumber	47				
103.524	asteriasone	1				
103.526	asterias	1				
103.53	sea cucumber	45				
103.533	sea cucumber	7				
103.536	sea cucumber	3				
103.54	sea cucumber	1				
103.542	sea cucumber	1				
103.543	asterias	1				
103.545	sea cucumber	2				
103.548	sea cucumber	8				
103.557	sea cucumber	70	asterias	1	snow crab	1
103.558	asterias	1				
103.563	sea cucumber	12				
103.568	sea cucumber	25				
103.577	asterias	1	sea cucumber	1		
103.582	asterias	1	toad crab	1	sea cucumber	2
103.592	sea cucumber	12				
103.594	asterias	1				
103.605	sea cucumber	55	northern red anemone	1		
103.607	sea cucumber	9				
103.608	asterias	1				
103.616	sea cucumber	44				
103.624	asterias	1	sea cucumber	1		
103.644	sea cucumber	200				
103.645	northern red anemone	1	sea cucumber	7		
103.648	asterias	1	sea cucumber	1		
103.657	sea cucumber	2				
103.662	sea cucumber	5				
103.665	sea cucumber	2				
103.668	sea cucumber	2				
103.671	asterias	1	sea cucumber	3		
103.674	sea cucumber	2				
103.678	sea cucumber	1				
103.69	sea cucumber	35	asterias	1		
103.694	sea cucumber	4				
103.701	sea cucumber	25				
103.704	sea cucumber	1				
103.709	sea cucumber	9				
103.711	sea cucumber	2				
103.713	asterias	1				
103.715	sea cucumber	1				
103.717	asterias	1				
103.72	sea cucumber	13				
103.727	sea cucumber	7				
103.734	sea cucumber	34				
103.739	sea cucumber	15				
103.752	sea cucumber	47				
103.752	asterias	1				
103.766	sea cucumber	125				
103.766	asterias	1				
103.768	sea cucumber	8				
103.78	sea cucumber	27				
103.781	northern red anemone	2				
103.783	northern red anemone	1				
103.79	sea cucumber	80				
103.792	sea cucumber	1				

KP	Fauna	#	Fauna	#	Fauna	#
103.803	sea cucumber	23				
103.807	asterias	1	sea cucumber	2		
103.814	sea cucumber	18				
103.816	sea cucumber	14	asterias	1		
103.82	sea cucumber	6				
103.825	sea cucumber	13				
103.829	sea cucumber	3				
103.834	sea cucumber	15				
103.84	sea cucumber	24				
103.844	asterias	1	sea cucumber	7		
103.847	sea cucumber	1				
103.851	asterias	20				
103.86	sea cucumber	24				
103.861	asterias	1	sea cucumber	2		
103.864	sea cucumber	5				
103.873	toad crab	2	sea cucumber	45		
103.876	asterias	1	sea cucumber	15		
103.881	sea cucumber	16				
103.884	sea cucumber	1				
103.892	sea cucumber	15				
103.888	snow crab	1				
103.893	asterias	15	sea cucumber	15		
103.9	sea cucumber	48				
103.908	sea cucumber	21	asterias	2		
103.914	sea cucumber	22				
103.925	sea cucumber	63				
103.929	sea cucumber	2				
103.936	Jonah crab	36				
103.947	sea cucumber	61				
103.955	northern red anemone	20				
103.976	asterias	64				
103.989	northern red anemone	69				
103.992	asterias	20				
103.995	asterias	25				
103.999	sea cucumber	12				
104.001	asterias	1				
104.01	snow crab	1				
104.029	snow crab	1	asterias	1		
104.036	snow crab	1				
104.037	asterias	1				
104.042	asterias	1				
104.062	asterias	2				
104.075	asterias	1				
104.089	asterias	1				
104.111	asterias	1				
104.125	asterias	1				
104.148	asterias	1				
104.15	northern red anemone	1				
104.162	asterias	1				
104.176	asteriasone	1	haddock	1		
104.216	asterias	1				
104.228	snow crab	1				
104.23	northern red anemone	1				
104.258	asterias	2				
104.273	asterias	1				
104.303	asterias	3				
104.345	asteriasone	1				
104.385	asterias	1				
104.392	asterias	1				
104.421	northern red anemone	1				
104.482	toad crab	1				
104.485	asterias	1				
104.499	asterias	1				
104.58	asterias	1				
104.599	wolfish	1				
104.613	snow crab	1	asterias	1		
104.646	asterias	1				
104.695	asterias	2				
104.7	cod	1				
104.725	asterias	1				
104.736	asterias	1	snow crab	1		
104.749	asterias	1				
104.759	asterias	1				
104.762	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
104.784	asterias	1				
104.798	asterias	1	asterias	1		
104.812	asterias	1				
104.973	northern red anemone	1				
105.007	asterias	1				
105.022	asterias	1				
105.032	asterias	1				
105.054	asterias	1				
105.156	asterias	1				
105.196	asterias	1				
105.199	asterias	1				
105.225	asterias	1				
105.226	sea raven	1				
105.37	asterias	2				
105.448	asterias	1				
105.515	asterias	1				
105.523	sea cucumber	1				
105.552	snow crab	1				
105.558	asterias	1				
105.59	snow crab	1				
105.613	asterias	1				
105.616	asteriasone	1				
105.663	asterias	1				
105.69	toad crab	1				
105.727	snow crab	1				
105.8	asterias	3				
105.836	asterias	1				
105.844	snow crab	2				
105.946	snow crab	1				
105.976	sea raven	1				
105.979	asteriasone	1				
106.025	cod	1				
106.052	asterias	2	snow crab	1		
106.095	asterias	1				
106.128	snow crab	1				
106.203	asterias	1				
106.205	snow crab	1				
106.228	asterias	1				
106.285	asterias	2				
106.289	asterias	1				
106.3	asterias	1				
106.361	asterias	1				
106.387	toad crab	1				
106.396	snow crab	1	asterias	1		
106.443	snow crab	1				
106.454	toad crab	1				
106.46	asterias	1				
106.491	asterias	1				
106.537	snow crab	1				
106.56	asteriasone	1				
106.589	wolffish	1				
106.621	monkfish	1				
106.69	asterias	1				
106.752	asterias	1				
106.783	toad crab	2				
106.812	asterias	1				
106.816	asterias	1				
106.907	snow crab	1				
106.94	sea cucumber	1				
106.978	snow crab	1				
106.98	snow crab	1				
107.005	asterias	1				
107.007	snow crab	1				
107.012	snow crab	1				
107.095	asterias	1				
107.125	asterias	2				
107.173	snow crab	1				
107.19	asterias	1	jellyfish	1		
107.247	monkfish	1				
107.254	kelp	1				
107.291	asterias	1				
107.298	asterias	1				
107.319	sea raven	1				
107.33	sunstar	1				

KP	Fauna	#	Fauna	#	Fauna	#
107.422	asterias	1				
107.582	sea cucumber	50+				
107.63	sea cucumber	50+				
107.666	haddock	1	sea cucumber	1		
107.667	sea cucumber	20				
107.671	asterias	1	sea cucumber	1		
107.673	sea urchin	1	sea cucumber	1		
107.68	sculpin	1	sea cucumber	1		
107.702	asterias	1	sea cucumber	1		
107.742	sea cucumber	1	jellyfish	1		
107.804	asterias	1	sea cucumber	1		
107.818	snow crab	1	sea cucumber	1		
107.856	asterias	1				
107.858	sea northern red anemoneenome	1				
107.865	sea cucumber	1				
107.872	kelp	1				
107.88	snow crab	1				
107.887	fish	1				
107.906	sea cucumber	1				
107.927	asterias	1				
107.978	haddock	1				
107.989	asterias	1				
108.003	asterias	1				
108.034	snow crab	1				
108.038	asterias	1				
108.099	haddock	1				
108.102	haddock	1				
108.109	asterias	1				
108.128	sculpin	1				
108.147	asterias	1	wolffish	1		
108.149	asterias	1				
108.162	snow crab	1				
108.175	asterias	1				
108.176	asterias	1				
108.178	asterias	1	sunstar	1		
108.196	asteriasone	1				
108.227	asterias	1				
108.23	asterias	1				
108.24	asterias	1				
108.246	asterias	1				
108.251	asterias	1				
108.269	wolffish	1				
108.306	asterias	1				
108.312	asterias	1				
108.316	asterias	1				
108.336	toad crab	1				
108.36	asterias	2				
108.392	snow crab	1				
108.401	asterias	1				
108.414	asterias	1				
108.416	asterias	1				
108.437	sunstar	1				
108.449	asterias	1				
108.451	asterias	1				
108.497	asterias	1	asterias	1		
108.5	asterias	2				
108.526	asterias	1	asterias	1		
108.542	asterias	1				
108.55	asterias	1				
108.558	asterias	3				
108.567	asterias	1				
108.581	asterias	1				
108.607	asterias	1				
108.633	asterias	1				
108.642	asterias	1				
108.646	wolffish	1				
108.649	snow crab	1				
108.661	asterias	1				
108.681	asterias	3				
108.69	asterias	1				
108.705	asterias	1				
108.716	asterias	1				
108.719	asterias	1				
108.723	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
108.729	asterias	1				
108.733	asterias	1				
108.735	asterias	1				
108.743	sea cucumber	1				
108.769	asterias	1	asterias	1		
108.774	asterias	1				
108.777	asterias one	1				
108.798	sole	1	asterias	1		
108.806	asterias	1				
108.819	asterias	1				
108.822	asterias	3				
108.823	sea cucumber	1				
108.824	sea cucumber	1				
108.825	sea cucumber	1				
108.854	asterias	2				
108.872	asterias	1				
108.895	asterias	1				
108.899	asterias	1				
108.902	asterias	1	sea cucumber	1		
108.964	sea cucumber	1				
108.992	redfish	1				
109.034	asterias	3				
109.047	asterias	1				
109.051	asterias	1				
109.12	asterias	1				
109.145	asterias	20				
109.147	snow crab	1				
109.167	asterias	10				
109.189	snow crab	1				
109.195	asterias	50				
109.202	asterias	1				
109.21	asterias	1	sculpin	1		
109.221	northern red anemone	1				
109.223	asterias	1				
109.239	snow crab	1	wolfish	1		
109.295	asterias	1				
109.303	asterias	20				
109.338	snow crab	1				
109.344	snow crab	1				
109.366	asterias	1				
109.37	asterias	1				
109.377	asterias	1				
109.379	snow crab	2				
109.392	asterias	3				
109.398	wolfish	1				
109.401	asterias	1				
109.404	asterias	3				
109.412	fish	1				
109.425	snow crab	1				
109.445	snow crab	1	asterias	1		
109.494	asterias	1				
109.498	asterias	1				
109.499	asterias	1				
109.508	asterias	1				
109.512	wolfish	1				
109.537	asterias	20				
109.549	asterias	50				
109.559	asterias	20				
109.561	asterias	1				
109.564	asterias	30				
109.568	snow crab	1				
109.57	asterias	2	asterias	20		
109.57	asterias	1				
109.587	asterias	1				
109.581	asterias	1				
109.597	asterias	2				
109.6	asterias	20				
109.601	asterias	1				
109.617	asterias	25				
109.625	cod	1				
109.63	asterias	20				
109.631	asterias	1				
109.632	asterias	1				
109.633	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
109.634	wolffish	1				
109.671	asterias	1				
109.676	asterias	1				
109.677	cod	1	sculpin	1		
109.681	asteriasone	1				
109.687	asterias	30				
109.693	asterias	1				
109.707	asterias	1				
109.711	northern red anemone	1				
109.721	asterias	50				
109.726	asterias	1	asterias	1	sea cucumber	1
109.74	asterias	1				
109.757	haddock	1				
109.79	asterias	1				
109.883	snow crab	1				
109.947	asterias	2	wolffish	1		
109.959	asterias	1				
109.995	asterias	1				
110.009	snow crab	1	asterias	1	sea cucumber	1
110.037	asterias	1				
110.07	asterias	1				
110.077	asterias	1				
110.083	asteriasone	1				
110.096	asterias	1				
110.15	asterias	1				
110.162	asterias	1				
110.17	asterias	1				
110.195	northern red anemone	1				
110.216	snow crab	1	asterias	1		
110.256	fish	1				
110.265	asterias	1				
110.287	northern red anemone	1				
110.291	asterias	1				
110.293	asterias	1				
110.294	cod	1				
110.296	northern red anemone	1				
110.298	asterias	1				
110.299	asterias	1				
110.301	sunstar	1				
110.315	asterias	1				
110.338	asterias	1				
110.367	asterias	1				
110.478	asterias	1				
110.52	fish	1				
110.539	fish	1				
110.557	asterias	1				
110.591	asterias	1				
110.628	snow crab	1				
110.634	asterias	1				
110.696	snow crab	1				
110.701	asteriasone	1				
110.71	asterias	1				
110.739	asterias	1				
110.764	asterias	1				
110.807	sea cucumber	1				
110.809	asterias	1	sea cucumber	1		
110.82	sea cucumber	1				
110.823	sea cucumber	4				
110.824	sea cucumber	15				
110.841	asterias	1				
110.918	asterias	1				
110.921	asterias	1				
110.96	asterias	1				
110.97	asterias	1				
110.9	asterias	1				
111.001	asterias	1	sea cucumber	1		
111.027	fish	1				
111.033	asterias	2	sunstar	1		
111.063	asterias	1	northern red anemone	1		
111.081	asterias	1				
111.107	asterias	1				
111.108	asterias	1				
111.117	asterias	1				
111.199	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
111.227	sea cucumber	1				
111.269	asterias	1				
111.283	asterias	1				
111.294	load crab	1	asterias	1		
111.314	asterias	1				
111.329	sole	1				
111.331	sunstar	1				
111.335	asterias	2				
111.398	asterias	1				
111.435	asterias	1				
111.452	wolffish	1				
111.468	asterias	1				
111.479	asterias	1				
111.495	sea cucumber	1				
111.51	sea cucumber	1				
111.512	sunstar	1				
111.538	asterias	1				
111.547	sea cucumber	1				
111.563	sea cucumber	2				
111.566	sea cucumber	2				
111.568	sea cucumber	3				
111.569	asterias	1				
111.573	sea cucumber	1				
111.621	asterias	1				
111.646	asteriasone	1				
111.649	asterias	1				
111.739	asterias	1				
111.75	sunstar	1				
111.765	asterias	1				
111.797	sea cucumber	1				
111.833	asterias	1				
111.848	asterias	1				
111.871	asterias	1				
111.9	sunstar	1				
111.907	asterias	1				
112.003	fish	1				
112.009	asterias	1				
112.014	asterias	1				
112.033	asterias	1				
112.041	asterias	1				
112.071	asterias	1				
112.072	asterias	1				
112.091	asterias	1				
112.117	asterias	1				
112.152	asterias	1				
112.154	snow crab	1				
112.169	sunstar	1				
112.187	asterias	1				
112.189	sunstar	1				
112.201	asterias	1				
112.21	asterias	1				
112.222	asterias	2				
112.227	asterias	1				
112.234	asterias	1				
112.24	asterias	1				
112.247	wolffish	1				
112.256	asterias	1				
112.329	asterias	1				
112.467	sea cucumber	1				
112.549	asterias	1				
112.567	wolffish	1				
112.573	asterias	1				
112.576	asterias	1				
112.581	asterias	1				
112.587	asterias	1				
112.628	wolffish	1				
112.642	northern red anemone	1				
112.666	sunstar	1				
112.666	asterias	1				
112.709	sea cucumber	1				
112.74	northern red anemone	1				
112.771	asterias	1				
112.773	asterias	1				
112.825	northern red anemone	1	asterias	1		

KP	Fauna	#	Fauna	#	Fauna	#
112.865	sunstar	1				
112.871	snow crab	1				
112.91	asterias	1				
112.94	sunstar	1				
113.101	northern red anemone	1				
113.103	sunstar	1				
113.126	northern red anemone	1				
113.136	asterias	1				
113.148	asterias	1				
113.219	wolffish	1				
113.251	asterias	1				
113.294	northern red anemone	1				
113.325	wolffish	1				
113.375	asterias	1				
113.379	northern red anemone	1				
113.437	asterias	1				
113.479	wolffish	1				
113.509	northern red anemone	1				
113.517	asterias	1				
113.523	asterias	1				
113.538	asterias	1				
113.544	northern red anemone	1				
113.547	asterias	1				
113.553	northern red anemone	1				
113.561	asterias	1				
113.564	sunstar	1				
113.569	northern red anemone	1				
113.585	asterias	1				
113.599	asterias	1				
113.61	asterias	1				
113.651	wolffish	1				
113.713	asterias	1				
113.716	wolffish	1				
113.726	wolffish	1				
113.736	sea cucumber	1				
113.74	northern red anemone	1				
113.763	sea cucumber	1				
113.796	northern red anemone	1				
113.802	asterias	1				
113.809	wolffish	1				
113.815	wolffish	1				
113.855	wolffish	1				
113.881	asterias	1				
113.891	asterias	1				
113.918	northern red anemone	1				
113.928	wolffish	1				
113.935	sunstar	2				
113.977	asterias	1				
113.982	asterias	1				
113.993	asterias	1				
114.018	seapens	1				
114.029	asterias	1				
114.048	asterias	1				
114.054	wolffish	1				
114.06	snow crab	1				
114.07	seapen	1				
114.74	asterias	1				
114.076	asterias	1				
114.082	sunstar	1				
114.091	sunstar	1				
114.147	asterias	1				
114.163	asterias	1				
114.169	seapen	1				
114.174	asterias	1				
114.18	sunstar	1				
114.218	wolffish	1				
114.224	sunstar	1				
114.24	asterias	1				
114.243	wolffish	1				
114.257	asterias	1				
114.261	asterias	1				
114.276	asterias	1				
114.3	asterias	1				
114.313	wolffish	1				

KP	Fauna	#	Fauna	#	Fauna	#
114.317	wolffish	1	sunstar	1		
114.367	asterias	1				
114.387	sunstar	1				
114.834	sea cucumber	1				
114.393	asterias	1				
114.403	seapen	1				
114.427	asterias	3				
114.43	asterias	1	sunstar	1		
114.438	wolffish	1				
114.443	asterias	1				
114.449	sunstar	2				
114.452	asterias	1				
114.455	asterias	2				
114.461	Jonah crab	1				
114.478	sunstar	1				
114.483	wolffish	1				
114.496	asterias	1				
114.521	sunstar	1				
114.545	asterias	1	snow crab	1		
114.58	kelp	1				
114.589	asterias	1				
114.591	northern red anemone	1				
114.627	northern red anemone	1				
114.629	northern red anemone	2				
114.631	sunstar	1				
114.679	asterias	1				
114.694	asterias	1				
114.708	sunstar	1				
114.715	asterias	1				
114.72	asterias	1				
114.727	asterias	1				
114.732	asterias	1				
114.737	asterias	1				
114.748	sunstar	1				
114.764	sunstar	1	asterias	1		
114.767	asterias	1				
114.79	asterias	1				
114.796	asterias	1				
114.797	seapen	1				
114.826	seapen	1				
114.831	asterias	1				
114.846	sunstar	1				
114.849	asterias	1				
114.852	asterias	1				
114.863	sunstar	2				
114.869	asterias	1				
114.883	sunstar	1				
114.885	seapen	1				
114.892	asterias	1				
114.909	sunstar	1				
114.912	asterias	1				
114.921	sea cucumber	1	sunstar	2		
114.937	sea cucumber	1				
114.954	asterias	1	sunstar	1		
114.957	asterias	1				
114.96	asterias	1				
114.963	asterias	1				
114.982	asterias	1				
114.997	wolffish	1				
115.003	sunstar	1				
115.008	asterias	1				
115.03	wolffish	1				
115.078	asterias	1				
115.101	asterias	1				
115.117	asterias	1				
115.134	asterias	1				
115.143	asterias	1				
115.148	sunstar	1				
115.152	seapen	1	sea cucumber	1		
115.167	sunstar	1				
115.173	sunstar	1				
115.189	asterias	1				
115.192	asterias	1				
115.196	asterias	1				

KP	Fauna	#	Fauna	#	Fauna	#
115.206	sunstar	1				
115.213	asterias	1				
115.22	asterias	1				
115.273	sea cucumber	1				
115.275	asterias	1				
115.278	sunstar	1				
115.282	asterias	2				
115.29	asterias	1	sunstar	1		
115.294	asterias	1	sunstar	1		
115.298	asterias	2				
115.306	asterias	1				
115.32	asterias	1	sunstar	1		
115.333	asterias	1				
115.345	sunstar	1				
115.419	wolffish	1				
115.428	asterias	1				
115.439	asterias	1				
115.455	asterias	1				
115.465	asterias	1				
115.467	sunstar	1				
115.474	asterias	1				
115.491	sunstar	1				
115.496	asterias	2				
115.503	sunstar	1				
115.507	snow crab	1				
115.514	wolffish	1	sea cucumber	1		
115.521	sunstar	1				
115.533	wolffish	1				
115.55	asterias	1				
115.556	sunstar	1				
115.565	asterias	1				
115.593	asterias	1				
115.596	sunstar	1				
115.603	asterias	1	seapen	1		
115.612	asterias	1				
115.627	asterias	1	northern red anemone	1		
115.632	asterias	1				
115.646	sunstar	1				
115.652	asterias	1				
115.66	asterias	2				
115.736	sea cucumber	1				
115.756	wolffish	1				
115.79	seapen	1				
115.795	asterias	1				
115.802	asterias	1				
115.813	asterias	1				
115.856	wolffish	1				
115.863	wolffish	1				
115.871	asterias	1				
115.891	asterias	1				
115.899	seapen	1				
115.918	asterias	1				
115.958	asterias	1	sunstar	1		
115.975	sunstar	1				
116.013	asterias	1				
116.016	asterias	1				
116.02	asterias	1				
116.021	asterias	1				
116.024	wolffish	1				
116.029	asterias	1				
116.039	asterias	2				
116.102	seapen	1	sea cucumber	1		
116.112	wolffish	1				
116.13	asterias	1				
116.142	asterias	1				
116.144	sunstar	1				
116.242	wolffish	1				
116.268	sunstar	1				
116.294	seapen	1				
116.3	sea cucumber	1				
116.311	wolffish	1				
116.324	wolffish	1				
116.366	wolffish	1				
116.383	kelp	1				

KP	Fauna	#	Fauna	#	Fauna	#
116.39	sea cucumber	1				
116.393	wolffish	1				
116.411	sunstar	1				
116.425	seapen	1				
116.447	asterias	1				
116.45	wolffish	1				
116.454	asterias	1				
116.457	asterias	1	sea cucumber	1		
116.58	fish	1	sea cucumber	1		
116.887	sunstar	2				
117.075	asterias	1				
117.119	sunstar	1				
117.388	asterias	1				
117.499	load crab	1				
117.559	wolffish	1				
117.842	asterias	1				
117.687	asterias	1				
117.706	asterias	1				
117.752	asterias	1				
117.865	asterias	3				
117.896	asterias	2				
117.926	asterias	1				
119.008	asterias	1				
119.095	asterias	2				
119.256	asterias	1				
119.406	asterias	1				
119.448	asterias	1				
119.54	asterias	1				
119.686	asterias	2				
119.855	asterias	1				
119.224	asterias	1				
119.499	asterias	1				
119.554	asterias	1				
119.681	asterias	1				
119.828	asterias	3				
119.88	asterias	2				
120.025	skate	1				
120.166	northern red anemone	1				
120.172	northern red anemone	1				
120.228	asterias	2				
120.409	northern red anemone	3				
120.442	asterias	1				
120.456	asterias	2				
120.487	asterias	1				
120.51	asterias	1				
120.516	northern red anemone	1	asterias	1	flounder	1

APPENDIX F

SENSORY EVALUATIONS AND ALIPHATIC HYDROCARBON BODY BURDEN IN MUSSELS



DALHOUSIE
University



**EVALUATION OF DEPLOYED MUSSELS AND TWO INDIVIDUAL
CRABS COLLECTED NEAR SABLE ISLAND FOR TAINING
HYDROCARBONS**

Submitted to:

Susan Belford
Jacques Whitford
Jacques Whitford Building
3 Spectacle Lake Drive
Dartmouth, Nova Scotia B3B 1W8

From

R.G. Ackman, A. Timmins and E.J. Macpherson
Canadian Institute of Fisheries Technology
Dalhousie University
P.O. Box 1000
Halifax, Nova Scotia B3J 2X4

September 24, 2002

Office D-401
"D" Building (A.L. MacDonald)
Sexton Campus
1360 Barrington St.
P.O. Box 1000
Halifax, Nova Scotia
Canada B3J 2X4

Tel: 902.494.6030
Fax: 902.420.0219
WWW: <http://www.dal.ca/~cifl/>

EVALUATION OF DEPLOYED MUSSELS AND TWO INDIVIDUAL CRAB COLLECTED NEAR SABLE ISLAND FOR TAINING HYDROCARBONS

Sample Lot Description

On July 23, 2002, two bags of test mussels and one crab from each of two monitoring sites were received from Jacques Whitford Environment Limited. The samples were identified as follows:

Mussels:

Venture mussels July 10/02

Thebaud mussels July 8/02

Crab:

Venture 10/07/02 NSD 16737 (species was not identified)

Thebaud Rock Crab ROV July 8/02

Sample Handling and Analysis

The mussel samples were frozen upon arrival and were immediately placed in -30°C storage. On July 30, 2002, 20 mussels were removed from the Venture mussels, and 15 mussels were taken from the Thebaud site for chemical analyses.

The crab samples were frozen upon arrival and were immediately placed in -30°C storage. When the crab samples were removed from frozen storage any attached frozen liquid was removed by rinsing the individual crabs under warm water. The crabs were quickly blotted dry and immediately weighed. Carapace width at the widest point and sex were noted at the same time. The crabs were male. The legs were removed from the crab bodies and the flesh removed from the legs and pooled for each sample site. The recovered leg flesh weights were 84 g for the Venture crab, and 89 g for the Thebaud Rock Crab. The leg flesh was used for chemical analysis including hydrocarbon, lipid and moisture determinations.

The crab carapace was removed and the hepatopancreas tissues recovered from each animal. The hepatopancreas weighed 8 g for the Venture crab and 22.6 g for the Thebaud Rock Crab. Due to the small sample size, the hepatopancreas tissue could only be subjected to one moisture determination and one hydrocarbon analysis, these being viewed as the most important parameters to be measured.

The analytical methods described in Appendix A of the report of September 27, 2000 were used to evaluate the mussels and adapted as required for the crab samples.

Results

Tables 1 through 4 show the results of the two mussel samples, while Tables 5 through 8 show the results for crab tissues.

- Table 1. Average Individual Weight (g) of Whole Mussels, Mussel Shells and Shell Contents (Meats).
- Table 2. Moisture and Lipid Contents (% wet weight) of the Mussels.
- Table 3. Lipid Classes (triacylglycerol, free fatty acids, sterols and polar lipids) in the Mussels.
- Table 4. Aliphatic Hydrocarbons of Importance (total C₁₀ to C₂₄, Oil Base Mud Region, pristane and 21:6 content) in the mussel.
- Table 5. Average Individual Weight (g) and Carapace Width (cm) of Crabs.
- Table 6. Moisture and Lipid Contents (% wet weight) of the Crab Tissues.
- Table 7. Lipid Classes (triacylglycerols, free fatty acids, 1,2-diacylglycerols, sterols and polar lipids) in the Crab Tissues.
- Table 8. Aliphatic Hydrocarbons of Importance (total C₁₀ to C₂₄, Oil Base Mud Region, pristane, and 21:6 content) in the Crab Tissues.

Discussion

Mussels

As shown in Figures 1 and 2 the Venture mussel hydrocarbon fraction showed a high level of “interfering” material, presumably of a hydrocarbon nature, emerging between 25 and 35 minutes of the gas chromatographic analysis. This region corresponds to between C₁₂ and C₁₇ aliphatic hydrocarbons and the material was similar to that observed in the Venture samples from July, 2001 mussels from the October 18, 2001 report to Jacques Whitford & Associates Ltd. The Thebaud mussels (Figures 3 and 4) showed minor interfering materials with a profile very similar to that of Figures 1 and 2. A small quantity of this interfering substance is also found in the Venture crab hepatopancreas (Figure 7).

The mussel lipid class details (Table 3) confirm the low lipid recoveries (Table 2) as Venture had more triacylglycerol and therefore more total lipid. Possibly these samples with low lipid were post-spawning animals, but the absence of pristane and low lipid seems more likely to represent poor phytoplankton availability. The weather of 2002 had been cold and cloudy in Nova Scotia

which would hinder the development of the usual spring phytoplankton bloom.

Crabs

The moisture determination in particular consumes considerably more sample than was available from the crab hepatopancreas, and the heat of drying would cause loss of hydrocarbons, so that sample cannot then be analysed. On the other hand the hepatopancreas is the principal fat storage site in crustacea, whereas the behaviour of the leg flesh would be lean and closer to that of the whole mussel in assimilating and storing hydrocarbons. Since biological fluids circulate through the active leg flesh the hydrocarbons there should represent fairly recent (weeks?) hydrocarbon exposure whereas the hepatopancreas might contain hydrocarbons representing a much longer exposure time as well as stirring up hydrocarbons from sediment from the results of their mobile behaviour on the bottom.

Unexpectedly both leg flesh samples (Figures 5 and 6) show more of the Nova Plus Drill Mud profile than of the hydrocarbon profile of n-alkanes expected from the mussels (Figures 3 and 4), using the internal standard for visual comparison.

The Venture hepatopancreas profile (Figure 7) showed the interfering hydrocarbon material already reported for the Venture mussels (Figures 1 and 2). Very close scrutiny also showed traces of the Nova Drill Plus Mud peaks intermixed with the C_{12} - C_{20} alkane profile normally reported for mussels.

The Thebaud hepatopancreas profile also included the normal alkanes, but the C_{15} - C_{18} region showed more of the peaks to be from the Nova Plus Drill mud (cf. Figure 8).

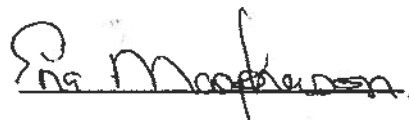
The surprisingly large pristane peak in the hydrocarbons from the Venture hepatopancreas suggests a localized diet rich in bottom invertebrates, or dead copepods or copepod feces, as it was not evident in the Thebaud crab hepatopancreas. However it is reflected in the Venture leg flesh hydrocarbons of Figure 5.



R.G. Ackman



A. Timmins



E.J. Macpherson

Table 1 Average Individual Weight (g) of Whole Mussels, Mussel Shells and Shell Contents (Meats)

Sample Site Location	Whole Mussels (g)	Shells (g)	Meats (g)
Venture ^a	10.68±2.73	5.86±1.47	4.59±1.76
Thebaud ^b	23.09±7.60	9.94±3.22	9.39±7.24

^a Based on measurements from 20 animals

^b Based on measurements from 15 animals

Table 2 Moisture and Lipid Contents (% wet weight) of the Mussels

Sample Site Location	Moisture Contents (%) (s.d.)		Lipid Contents (%) (s.d.)	
Venture	87.40	±0.02	1.26	--
Thebaud	89.55	±0.04	0.81	.02

s.d. = Standard deviation calculated on two determinations

Table 3 Lipid Classes (area % of the total lipid fraction ^a) in the Mussels

Sample Site Location	Triacylglycerol (area %)	Free Fatty Acid (area %)	Sterol (area%)	Polar Lipid (area%)
Venture	29.4	8.2	1.7	60.8
Thebaud				
Duplicate 1	14.6	9.5	3.4	72.5
Duplicate 2	15.4	9.8	3.3	71.5

^a uncorrected for detector response, DAG was not observed

s.d. = Standard deviation

Table 4 Aliphatic Hydrocarbons of Importance (ppm, dry tissue basis) in the Mussels

Sample Site Location	Aliphatic Hydrocarbons	Notable Hydrocarbons		Chromatograph
	Total, C ₁₀ to C ₂₄ ^a (ppm)	Pristane (ppm)	21:6 (ppm)	Chart Figure No.
Venture July 10/02	*	*	ND	1,2
Thebaud July 08/02				
Duplicate 1	44.42	0.32	ND	3
Duplicate 2	44.66	0.24	ND	4

^a Excluding the interfering materials, the specific alkane pattern suggests a possible biogenic origin for the aliphatic HCs.

* interfering substances present

ND = not detected

Table 5 Average Individual Weight (g) and Carapace Width (cm) of Crabs

Sample Site Location	Whole Crab (g)	Carapace (cm)	Number of Crabs Measured
Venture Crab (unidentified species)	329.93	12.0	1
Thebaud Rock Crab	410.14	14.5	1

Table 6 Moisture and Lipid Contents (% wet weight) of the Crab Tissues

Sample Site Location	Leg Flesh Moisture Contents		Leg Flesh Lipid Contents		Hepatopancreas** Moisture Contents	
	(%)	s.d.	(%)	s.d.	(%)	s.d.
Venture crab (unidentified species)	79.44	0.01	0.84	--	82.07	*
Thebaud Rock Crab	86.64	0.22	0.47	--	87.93	*

s.d. = Standard deviation calculated on two determinations.

* = small sample, only one determination

** = small sample, entire sample used for hydrocarbon and moisture determination only.

Table 7 Lipid Classes (area % of the total lipid fraction ^a) in the Crab Leg Tissues

Sample Site Location	Flesh			
	Triacylglycerol (area %)	Free Fatty Acid (area %)	Sterol (area %)	Polar Lipid (area %)
Venture Crab (unidentified species)	0.8	5.1	2.4	91.7
Thebaud Rock Crab	0.4	3.3	5.2	91.9

^a uncorrected for detector response

s.d. = Standard deviation

Table 8 Aliphatic Hydrocarbons of Importance (ppm, dry tissue basis) in Crab Tissues**Flesh**

Sample Site Location	Aliphatic Hydrocarbons	Notable Hydrocarbons		Chromatograph
	Total, C₁₀ to C₂₄^a (ppm)	Pristane (ppm)	21:6 (ppm)	Chart Figure No.
Venture Crab (unidentified species)	35.55	3.84	ND	5
Thebaud Rock Crab	36.58	0.81	ND	6

Hepatopancreas

Venture Crab (unidentified species)	146.18	38.14	ND	7
Thebaud Rock Crab	15.38	0.54	ND	8

^a the specific alkane pattern suggests a possible biogenic origin for the aliphatic HC.

s.d. = Standard deviation

APPENDIX A

From October 18, 2001 Report to Jacques Whitford and Associates Ltd.

Appendix A

from October 18, 2001 report to Jacques
Whitford and Associates Ltd.
Nova Plus Drill Mud Oil

R CORP. PART NO. N625-1026

Q57

PERKIN ELMER CORP. PART NO. N625-1026

Q58

PERKIN EL

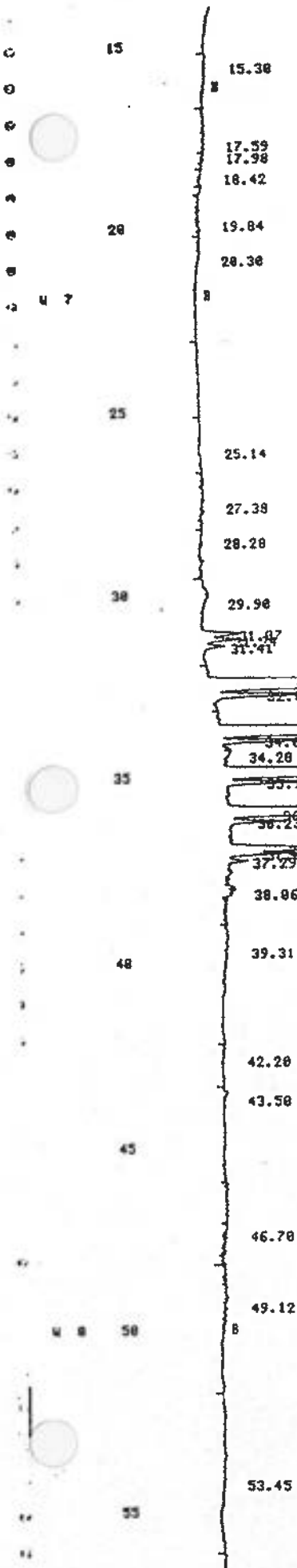


Figure 1

Venture - Mussels (dilute)

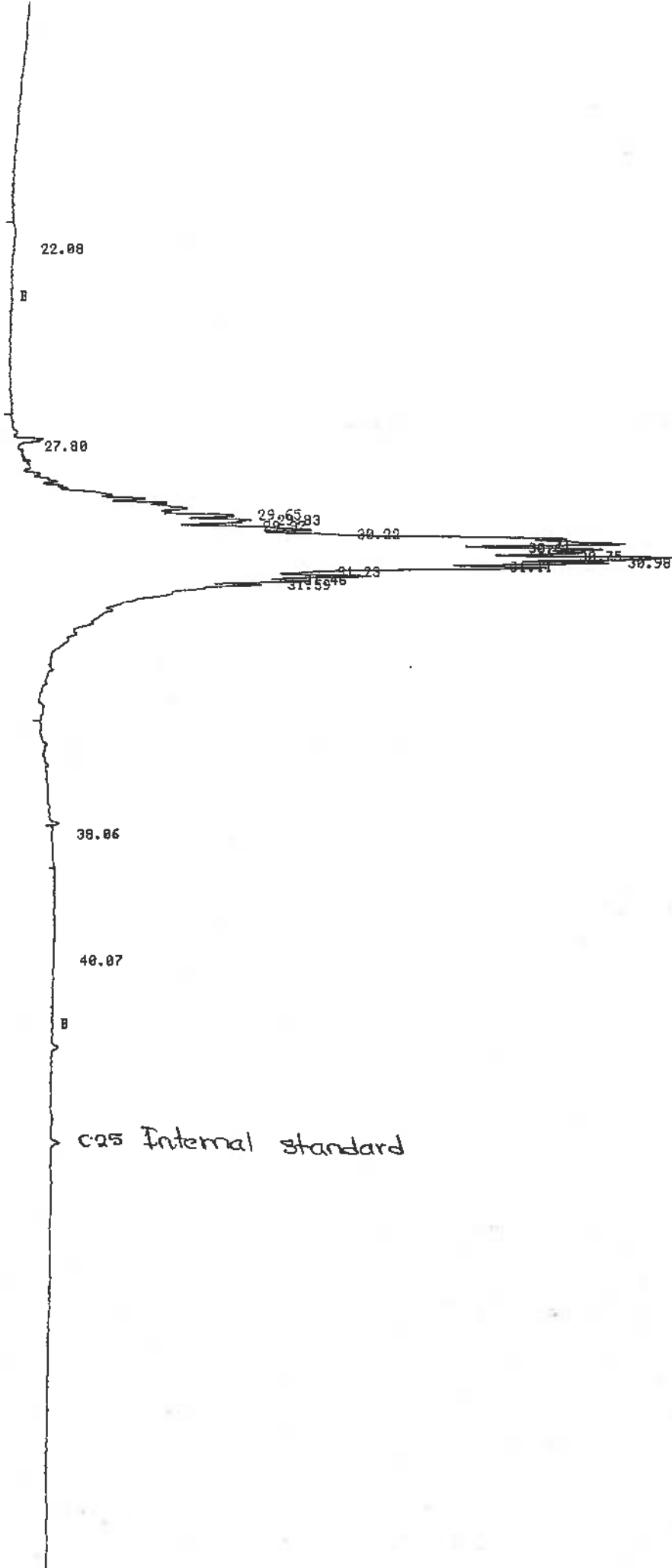


Figure 2

Venture - Mussels

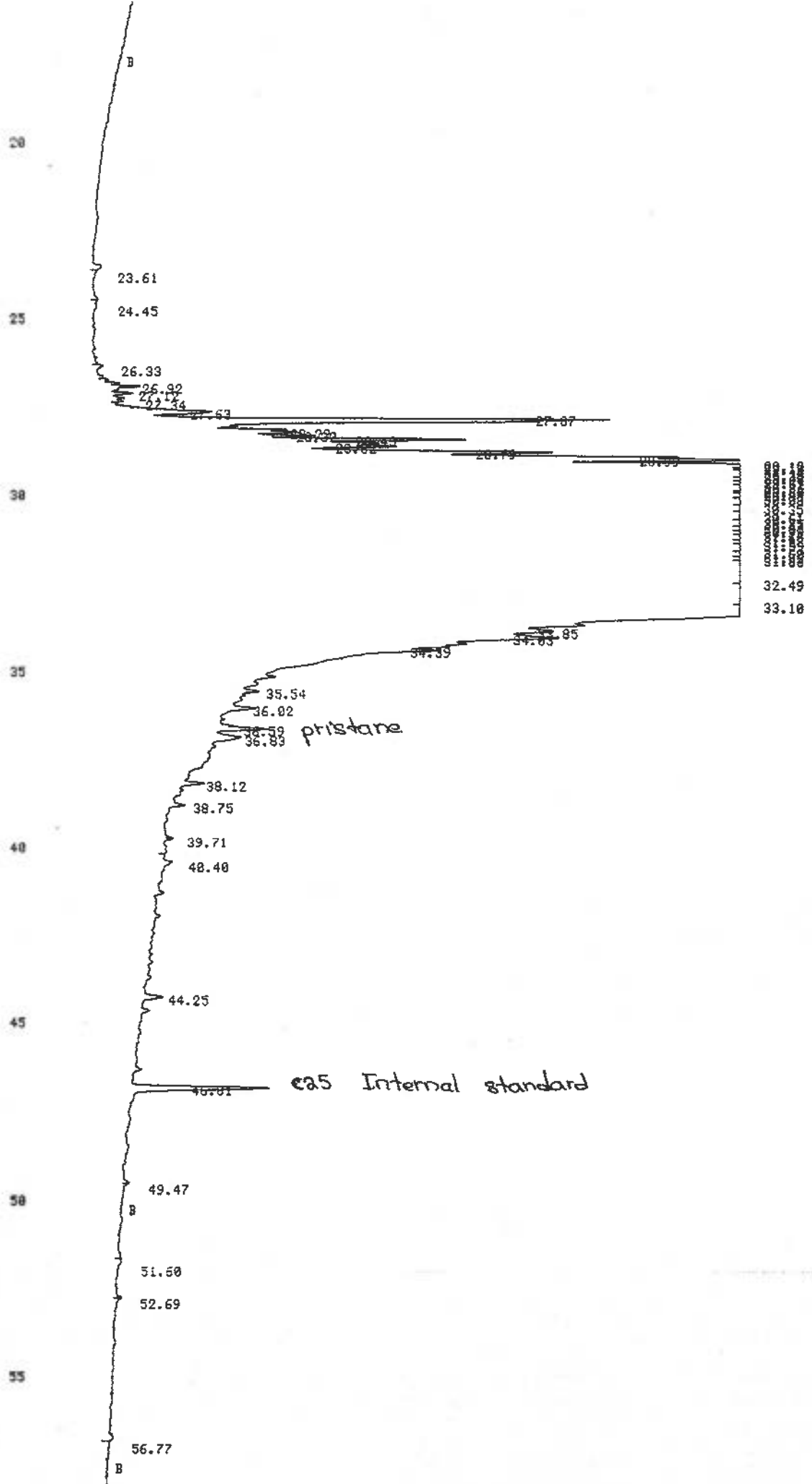


Figure 3

Thebaud - Mussels

Duplicate 1

NO. N625-1026

019

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PERKIN ELMER CORP.

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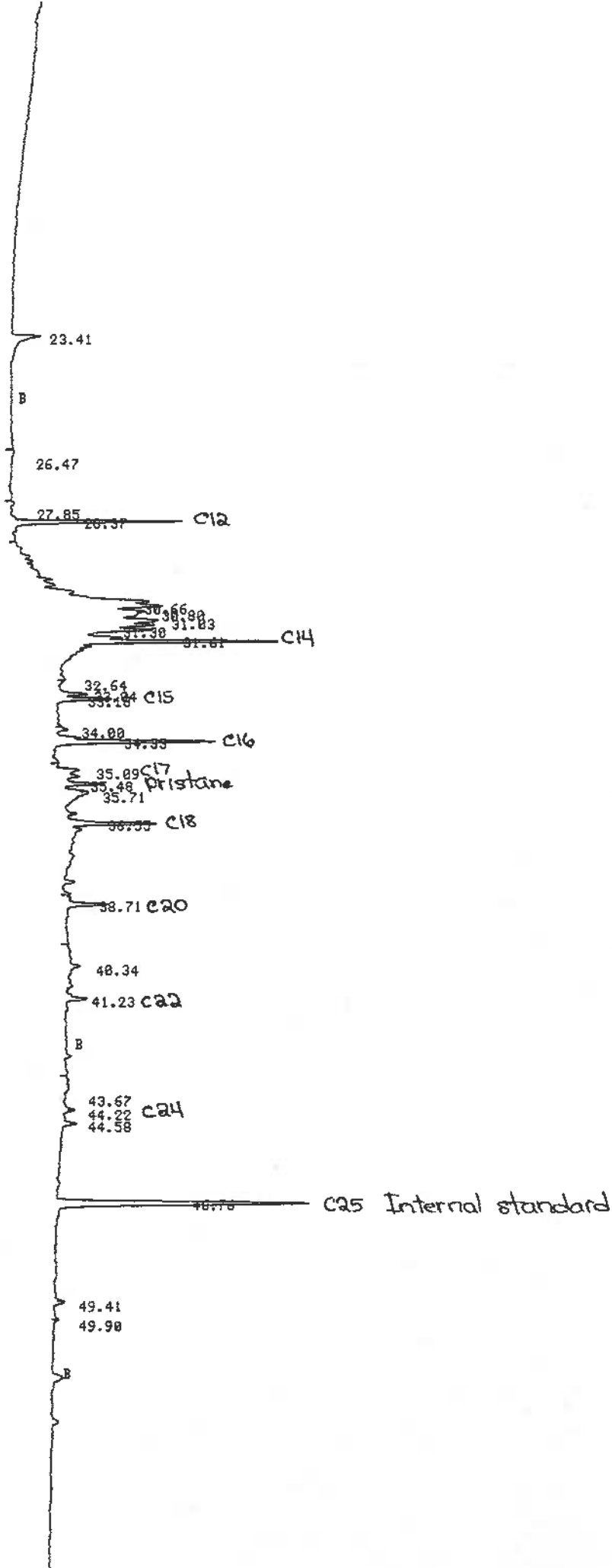


Figure 4

Thebaud - Mussels

Duplicate 2

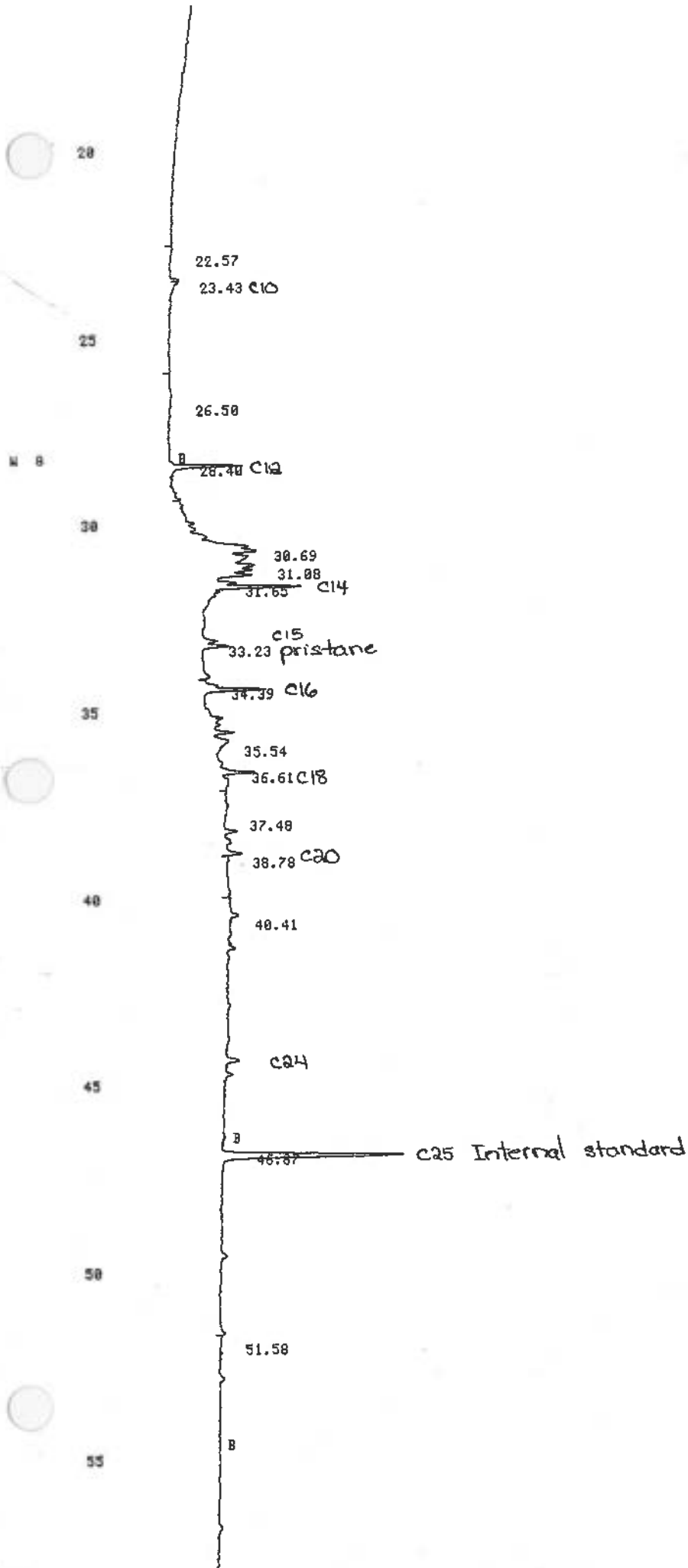


Figure 5

Venture - Crab Leg Flesh

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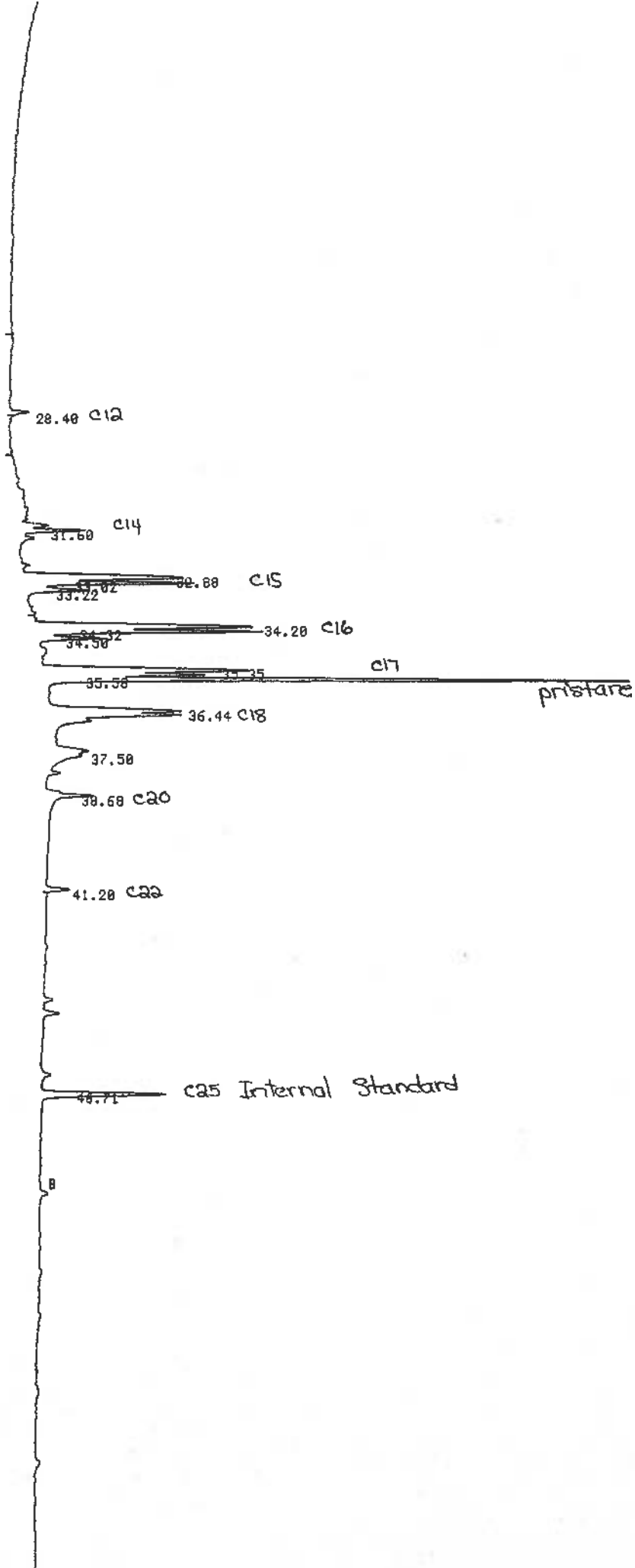


Figure 6

Thebaud - Rock Crab Leg Flesh

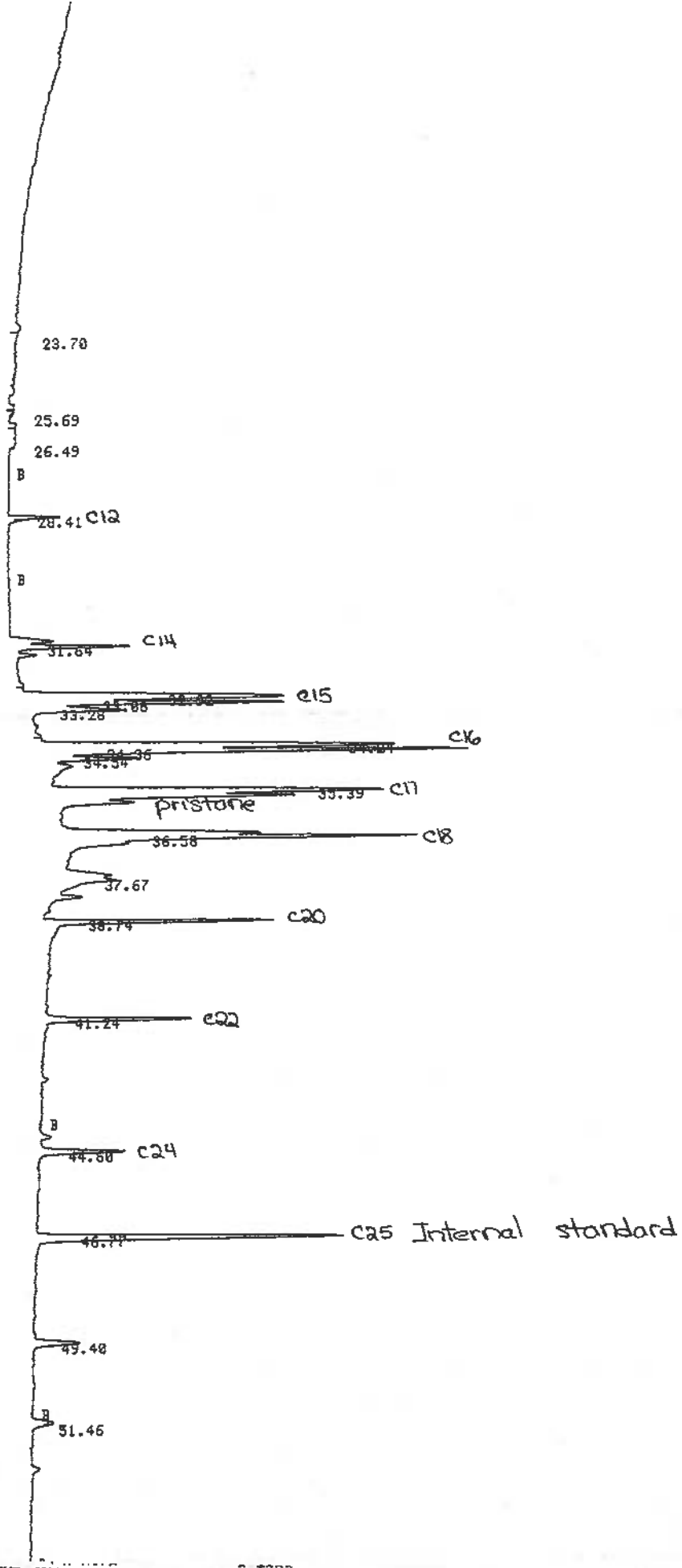


Figure 7

Venture - Crab Hepatopancreas

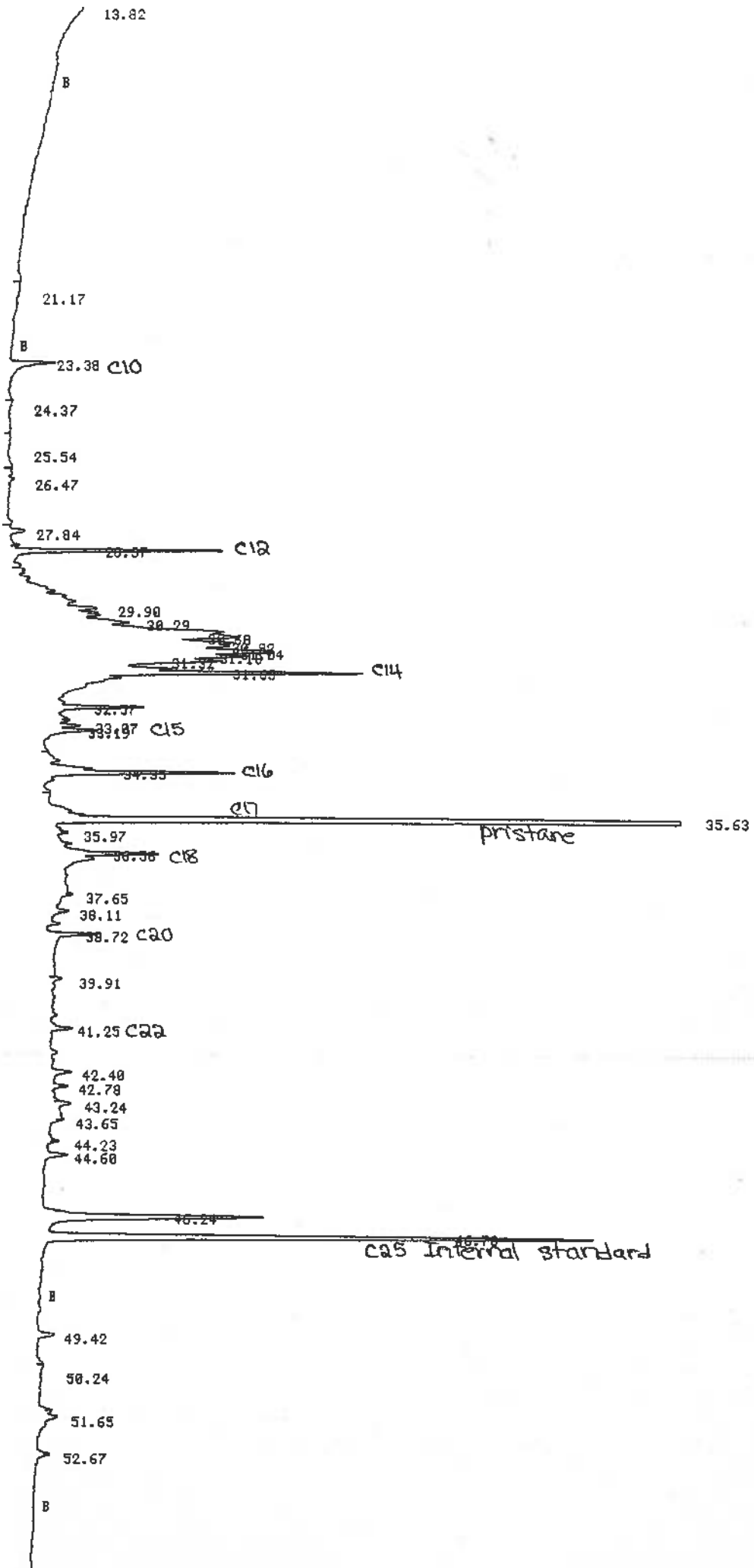


Figure 8

Thebaud - Rock Crab Hepatopancreas

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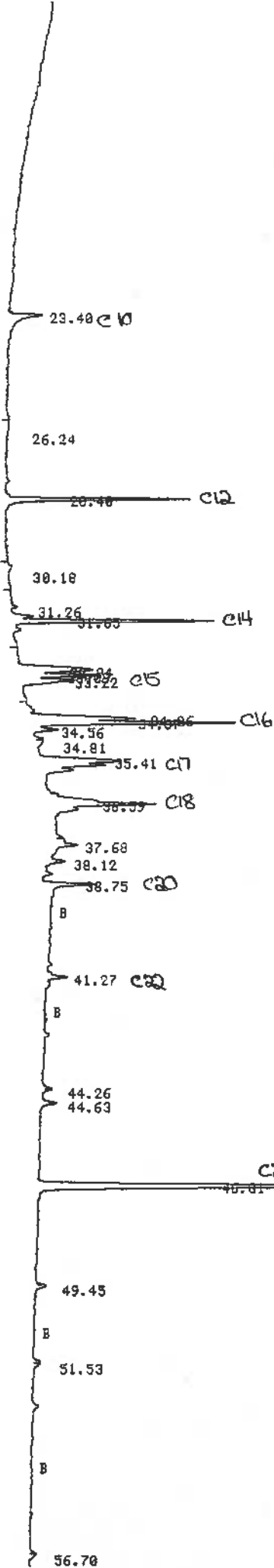
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PERKIN ELMER CORP. PART NO. N625-1